

AMERICAN BUILDER

THE WORLD'S GREATEST BUILDING PAPER

Vol. 45.

CONTENTS FOR JULY, 1928

No. 4.

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Published on the first day of each month by American Carpenter and Builder Co.; Wm. A. Radford, *President, Treasurer and Editor-in-Chief*; Wm. A. Radford, Jr., *Vice-President*; E. L. Hatfield, *Vice-President and General Manager*; Bernard L. Johnson, *Vice-President and Editor*; Roland D. Radford, *Secretary*; S. C. Kellenberger, *Dealer Service*; Charles G. Peker, *Eastern Editor*; Juan Homs, *Export Editor*; Delbert W. Smith, E. B. Wolfrom, C. R. W. Edgcumbe, L. H. Reich, O. H. Sutter, Cecil W. Blashill, H. P. Sessions, J. J. Dubro, R. E. Clement, *Advertising Staff*.

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SUBSCRIPTION RATES—One year, United States, Canada, Mexico, and U. S. Possessions, \$2.00; six months, \$1.00; single copies, 35 cents. Foreign countries, \$4.00.

PROTECTION FOR OUR READERS—The publishers of the AMERICAN BUILDER reserve the right to decline any advertising they believe is detrimental to the interest of its readers; to edit advertising copy and to change or eliminate any statements that reflect injuriously or cast discredit upon other building products, machinery, equipment, supplies or tools.

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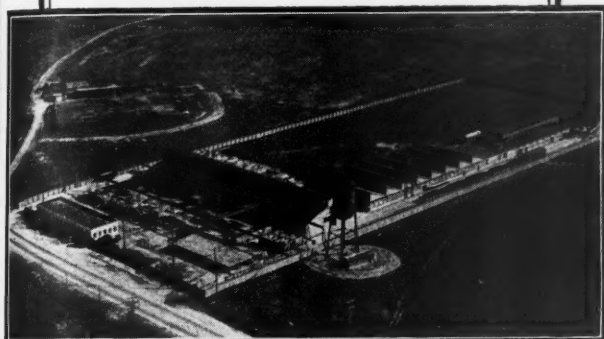
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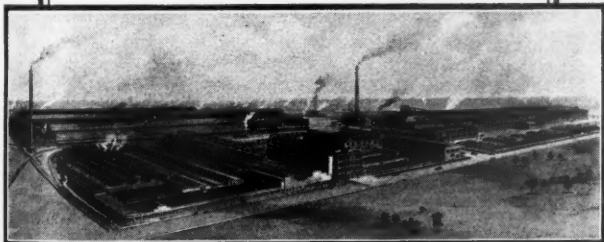
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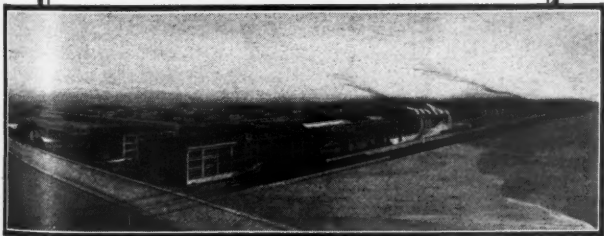
IN YOUNGSTOWN



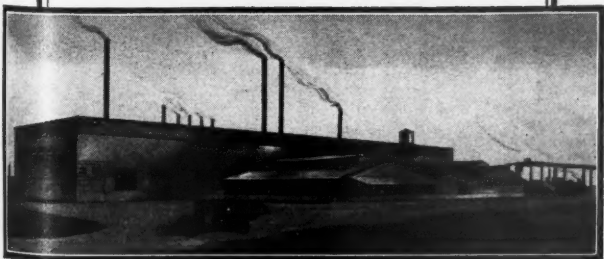
IN LOS ANGELES



IN CLEVELAND



IN DETROIT



IN JAPAN

TRUSCON

The only company the world over, manufacturing a complete line of Steel Building Products

Truscon has long been and remains the pioneer and leader in the design and manufacture of firesafe building products. After more than 25 years of constant engineering research and practical co-operation with contractors and builders, Truscon presents to the building trade the only complete line of Firesafe Building Products manufactured entirely by one organization. Through Truscon, the builder is now able to secure economies which were hitherto impossible. Truscon warehouses form a network extending over the entire country and offering to the builder prompt delivery service on any one or all the products in the Truscon line. The Truscon method of manufacture, involving an extensive standardization, makes available lower prices than could have been achieved otherwise. When you deal with Truscon you get all of these advantages. Truscon willingly co-operates with contractors and builders anywhere, offering engineering advice on all problems of firesafe construction, giving aid in preparation of estimates, etc.

TRUSCON STEEL COMPANY, Youngstown, Ohio

Established 1903

Warehouses and Offices in all Principal Cities

PERMANENT BUILDING PRODUCTS

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Slidetite SLIDES DOORS INSIDE

Where they are away from snow and ice

No garage is better than the doors which enclose it. That is why *Slidetite* equipped doors are such a good investment.

And they not only assure your car the protection it deserves, but they save you an endless amount of time, trouble and annoyance.

Because they slide *inside* the garage, *Slidetite* doors are not exposed to wind, rain, sleet, ice or snow. They won't blow shut. They won't stick. They won't sag, shrink or rust.

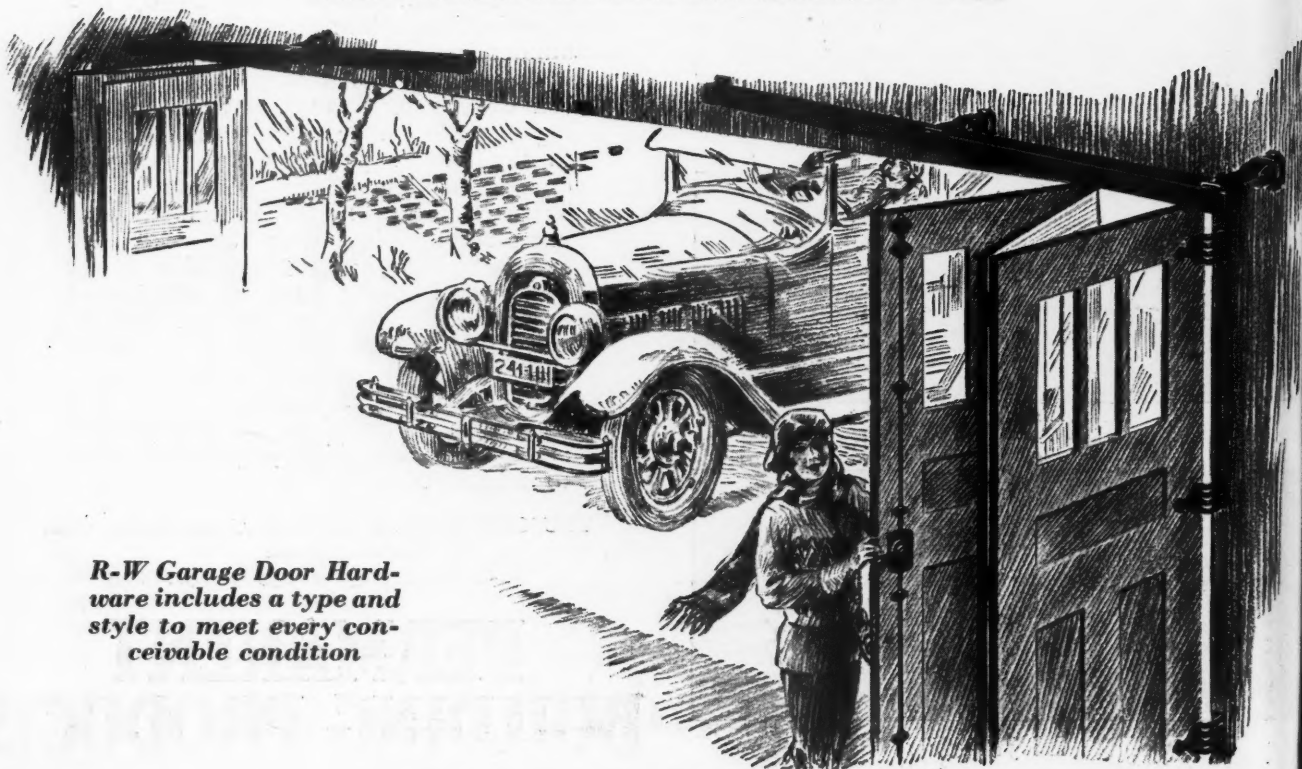
Another advantage of *Slidetite* garage doors is that they do away with dangerous center posts, and thus give you an unobstructed, full-width opening.

Slidetite, with lock-joint brackets, is packed in complete sets for 3, 4, 6 and 8 doors. To insure satisfaction buy complete sets only.

Richards-Wilcox Mfg. Co.

A Hanger for any Door that Slides.

New York . . . AURORA, ILLINOIS, U.S.A. . . . Chicago
 Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
 Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
 Montreal . RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. . Winnipeg



R-W Garage Door Hardware includes a type and style to meet every conceivable condition

It Locks the Joints Together *Permanently*

The **R-W**
LOCK JOINT
TROLLEY TRACK



Regardless of its length, your trolley track can now be made practically a *one-piece track*, by using the R-W Lock Joint.

A perfected product of Richards-Wilcox, it locks the joints so

tightly that hangers operate smoothly and trouble-free.

The R-W Lock Joint can be obtained only with trolley track carrying the R-W trade mark.

Ask for it by name.

Richards-Wilcox Mfg. Co.
"A Hanger for any Door that Slides."

New York **AURORA, ILLINOIS, U.S.A.** Chicago
Boston Philadelphia Cleveland Cincinnati Indianapolis St. Louis New Orleans Des Moines
Minneapolis Kansas City Los Angeles San Francisco Omaha Seattle Detroit
Montreal RICHARDS-WILCOX CANADIAN CO., LTD., LONDON, ONT. Winnipeg

Stone Houses No Longer a Luxury

New dollar-saving methods of preparing, handling and using Indiana Limestone open up sales opportunity for the contractor.

Write for free plan book and full details

THIS is to tell you of a new opportunity in the building field. New production methods in the Indiana Limestone industry now make the use of stone for medium-cost residences just as practicable as the use of brick, wood, or stucco.

Free plan book

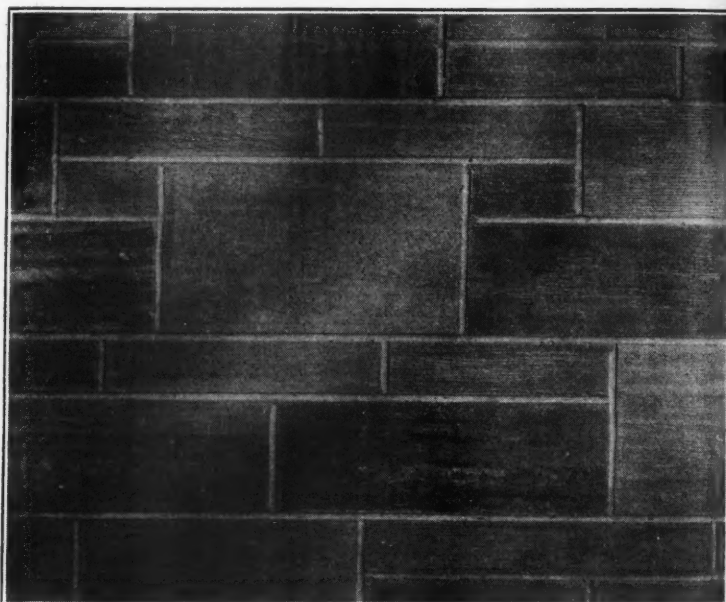
Write for booklet showing different types of houses built of Indiana Limestone and telling all about their construction. Stone offers you the opportunity to get away from dead level competition. To establish yourself as a builder of unique residences, different from those that everybody else is putting up.

Indiana Limestone is the same fine, light-colored natural stone of which big buildings all over the country are being constructed. For residences Random Ashlar facing is used. The stone is sawed into strips four inches thick at the quarry. The stone sawed on top, sides and bottom is then shipped directly to the job. The strips of stone are broken to length, jointed right on the job and laid up in the wall by a stone-mason or bricklayer. The only cut-stone required is the sills and steps.

New speed methods

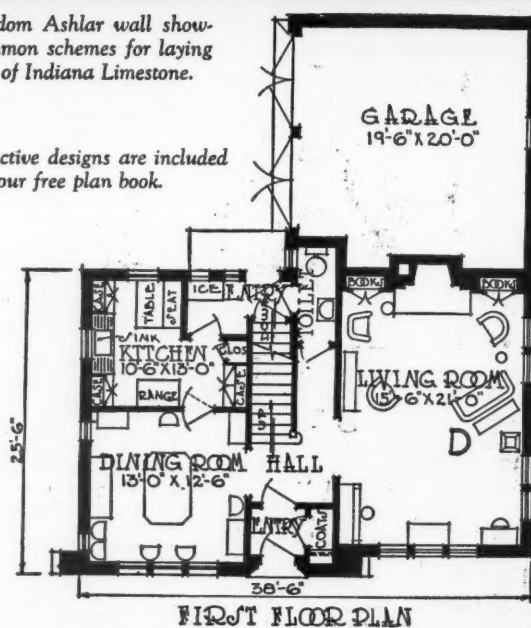
An electric carborundum saw takes the place of the old-fashioned mallet and chisel for breaking, or an ordinary bucksaw may be used. With this new equipment one man can keep six stone-masons busy. Thus your stone-masons spend all their time on the wall laying up stone.

Indiana Limestone Random Ashlar is easy to handle. No carefully prepared drawings are re-



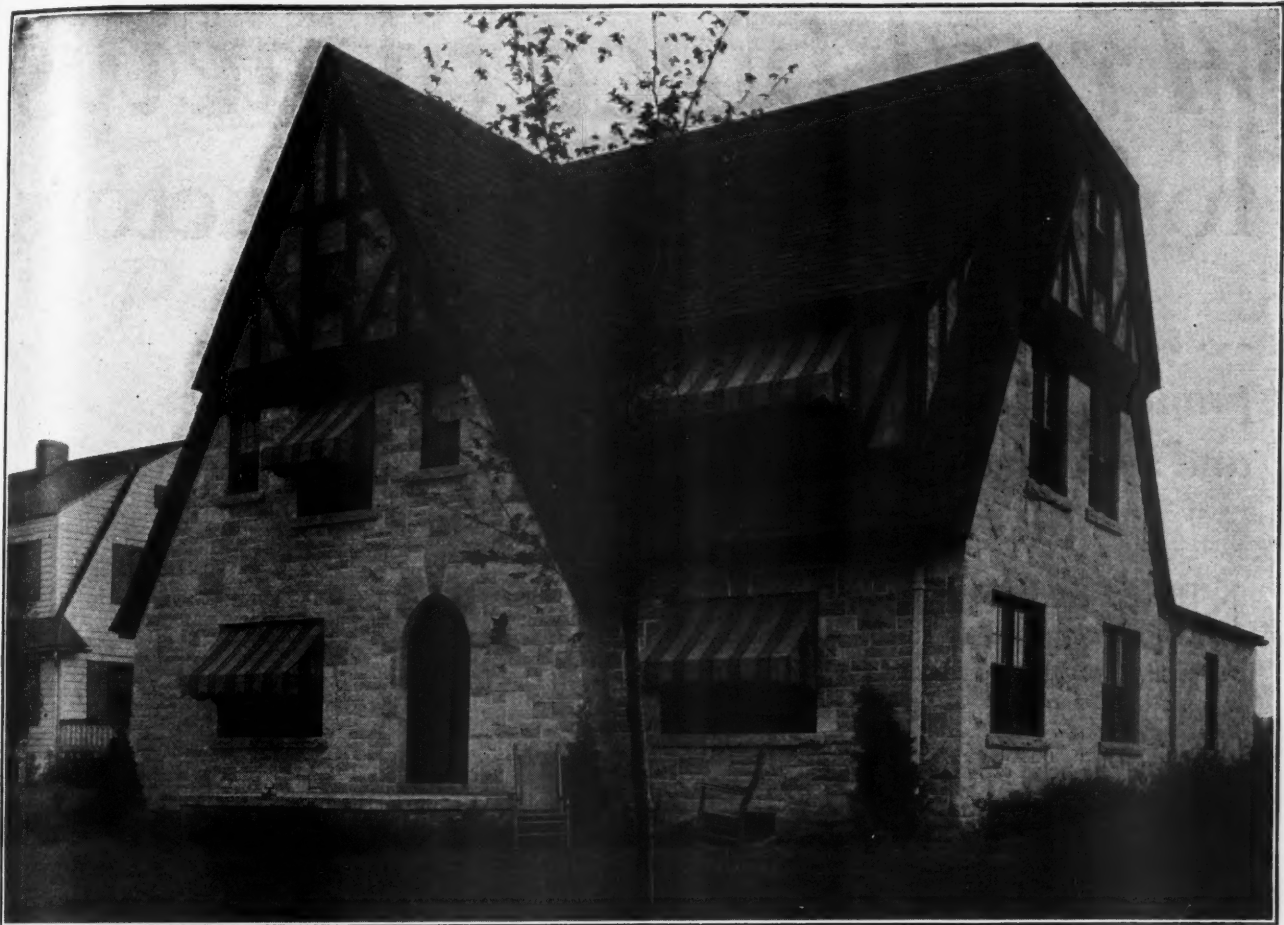
Detail of Random Ashlar wall showing one of common schemes for laying up this class of Indiana Limestone.

Many attractive designs are included in our free plan book.



INDIANA LIMESTONE COMPANY • GENERAL OFFICES: BEDFORD

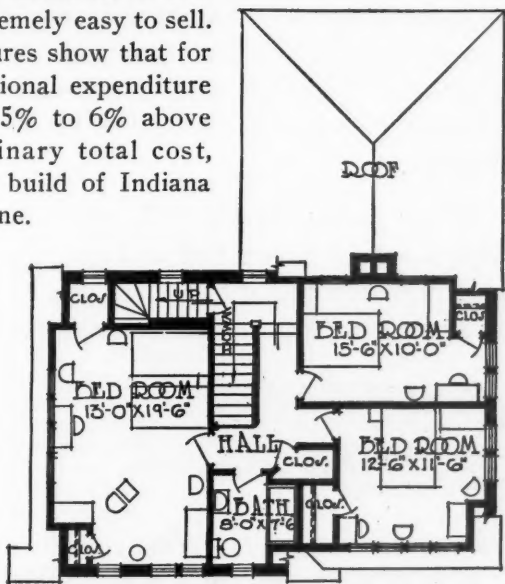
FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



Emory Goff residence, Des Moines, Iowa. Vorse, Kraetsch & Kraetsch, Architects.
Built of Indiana Limestone showing a mixture of sawed and split face finishes laid up as Random Ashlar.

quired. The illustrations here show the way that this class of Indiana Limestone looks when laid up in the wall. Many interesting variations are possible.

Houses built of Indiana Limestone have proved they are moderate in cost and extremely easy to sell. Our figures show that for an additional expenditure of only 5% to 6% above the ordinary total cost, one can build of Indiana Limestone.



SECOND FLOOR PLAN

Who we are

The Indiana Limestone Company was formed in 1926. It is a consolidation of 24 of the principal properties in the Indiana Limestone district. With assets of over \$46,000,000.00, with 19 branch offices and ample facilities, we are in a position to give you every possible assistance when starting to build Indiana Limestone houses. The residence field is a field we are now particularly interested in.

Get the facts now

Here is a great opportunity for a contractor in each locality to begin building houses of Indiana Limestone. Let that contractor be you. Write today for free plan book and full information on the use of this beautiful stone. Use the convenient coupon.

Fill in, Clip and Mail

Box 757, Service Department,
Indiana Limestone Company, Bedford, Indiana

Send me full information on Indiana Limestone for
Random Ashlar facing for residences.

Name

Address

City..... State.....

INDIANA

EXECUTIVE OFFICES: TRIBUNE TOWER, CHICAGO

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

A real piece of news for builders and contractors

... sell and rent more quickly, more profitably. Save space; save labor and materials—this new simple way!

NEVER before have people demanded as much from the builder and contractor as they are demanding today. They not only insist upon apartments that are the last word in compactness and convenience, but they want good large living rooms—and at the price they are prepared to pay.

Fortunately, a way has been found to meet this situation, a sure simple way that will enable you to sell and rent more quickly, more profitably!

This is assured by the Seng Duofold Roller Bed. The Seng Duofold is not a cumbersome built-in makeshift but an attractive modern bed for two that folds up in a jiffy. It is so compact that it can be rolled out of sight during the day in a closet as small as 31" x 23" or 23" x 31". When wanted at night, it can be moved with one hand to any position desired, and without disturbing other furniture.

Because of its exclusive advantages, the Seng Duofold permits the use of narrower closet doors in the living room, or none at



Out of sight in a 31" x 23" closet. Can be moved about anywhere with one hand.

all if the closet is located in the hall. This makes certain a marked saving in space, labor and materials, and a considerably larger living room than would otherwise be possible.

Write today for the full story of the Seng Duofold Roller Bed and the remarkable new opportunity it offers you to sell and rent more quickly and more profitably!

THE SENG COMPANY

1452 Dayton Street • Chicago, Ill.

Manufacturers and Patentees

SENG *Duofold* ROLLER BED

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

FREE!

Your Proof of Performance is Ready

GET IT!

POINTING THE WAY gives the definite facts about Clarke construction—showing the actual features of superiority—the reason why it is beyond compare in quality and quantity—in variety of work—in long life—in economy of operation.

Here in downright black and white, illustrated by pictures in glowing colors, are the facts you want to know about a Sanding Machine. In words and actual photographs we show what the Clarke will do. You see pictures of it on the job.

We show clearly and conclusively why the Clarke, and **ONLY THE CLARKE**, backs every statement with the definite, positive, written guarantee of performance.

Why the Clarke makes more profits for you in every way—every day.

Why the swing towards the Clarke has the irresistible force of a tidal wave, and why it has paid practical men to discard heavy, expensive, old type machines in favor of the up-to-date, light, powerful, fast cutting Clarke.

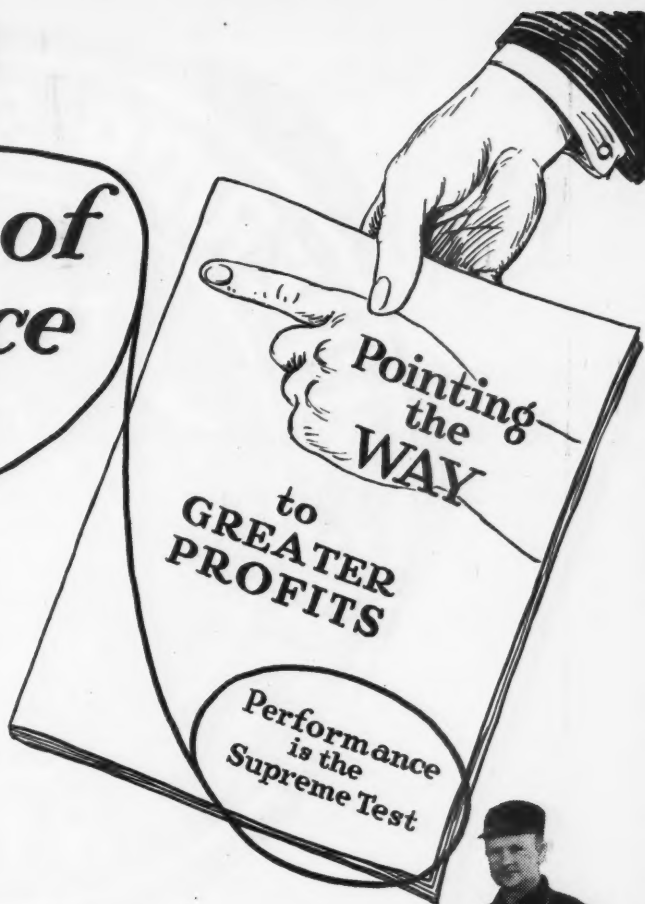
POINTING THE WAY is a mine of useful information for the practical man—the contractor—carpenter—woodworker. He can't know the utmost in sanding possibilities till he reads it.

It contains actual letters from users all

over the country; letters containing not generalities but actual, **SPECIFIC** facts of what the Clarke is doing. Actual figures of quantity performance—actual facts of saving—actual facts of greater profits. There's the living testimony of men who made \$20 an hour with the Clarke—of men who built a reputation by doing work others could not do with old fashioned Sanders—instance after instance from the living experience of individuals and great corporations, for whom the Clarke opened up new and greater money-making and money-saving opportunities.

Money Making Facts Never Before Printed Anywhere

Whether you need a Sander or not, you do need the facts contained in this wonderful testimony; for **POINTING THE WAY** shows so plainly anyone can understand—so simply anyone can follow it—the definite certain way, that surely leads to bigger earnings—greater profits. They are worth money to you, but you get them free.



USE THE COUPON

Do not buy any sander, at any time, at any place, at any price, until you see what work the Clarke can do for you.



— answers all calls



CLARKE SANDING MACHINE CO.
Dept. A-27, 3815 Cortland Street, Chicago, Ill.

Originators, and, for 11 years Manufacturers of
Portable Sanding Machines

CLARKE SANDING MACHINE CO.,
Dept. A-27, 3815 Cortland St.,
Chicago, Illinois.

Please send me illustrated copy of "Pointing the Way to Greater Profits" which shows actual Proof of Performance, and money-making facts of the Clarke Vacuum Portable Sander.

Name.....

Address.....

City..... State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



*acknowledged
advancement
in sheet metal*

*a heavy lead coated sheet
obtainable in flat sheets and
various formed products
for sheet metal work on
all types of buildings*

DIVISION OF CONTINENTAL STEEL CORPORATION

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

We are closing out these "White" Kitchen Cabinets at a real Sacrifice!

**Until August 30th
Only!**

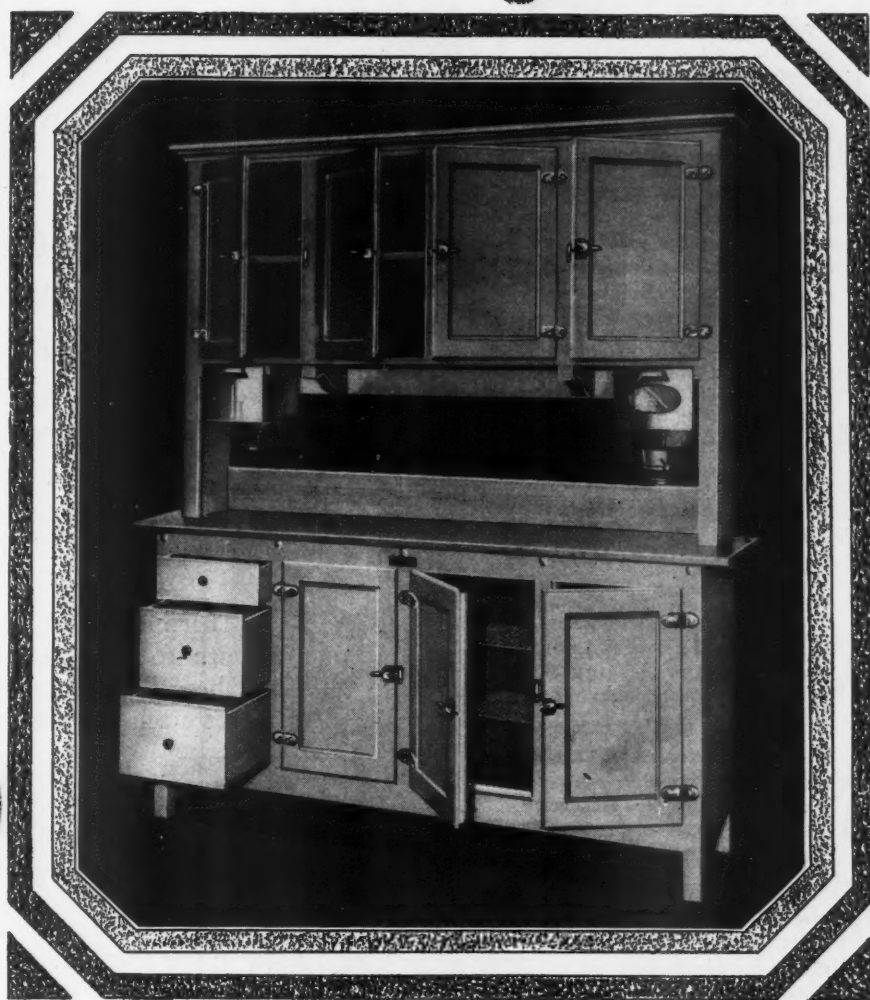
**"Challenge"
Kitchen Cabinets**

(Regular Price \$95.00)

Reduced To

79.50

A REMARKABLE buy—one you will not duplicate! An attractive kitchen cabinet that includes pantry, refrigerator, work table and storage cabinet in one. Built to set directly against the wall as top section has no back. Both ends are finished so they can be exposed if desired. Built of clear white wood, finished with protective priming coat of toned lacquer so cabinet can be painted to match any trim. Only a limited quantity available. Order now. Orders filled as received. Shipped from Chicago.



Refrigerator in lower section has 100 lb. capacity ice compartment and refrigerated food compartment with 2 wire shelves. Refrigerator section has 1½ in. cork insulated walls; galvanized iron lined. Refrigerator may be had at either right or left, for either front, end or rear icing. Balance of lower section contains utensil storage compartment and 3 wood drawers. Top section contains flour bin with sifter, sugar bin and 4 storage compartments. Maple work top, 6 ft. 3 in. long and 1 ft. 8 in. deep. Cabinet is 5 ft. 9 in. wide; approximately 7 ft. high overall.

The "White" Door Bed Company

Executive Offices

5607-09 Grand Central Terminal, New York

Western Sales Office

130 N. Wells St., Chicago

**✓ Send your
Order Now!**

The "White" Door Bed Company,
5607 Grand Central Terminal Bldg.,
New York City.

Kindly send us Kitchen Cabinets as advertised in The American Builder at \$79.50 each. Check enclosed. Send C. O. D. Ship via.....

Refrigerator at.....side, foricing.....

Name

Address

City..... State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



After breakfast—the room cleared and the carpenter ready to nail down the finished CROMAR Flooring.

On new-building or relaying jobs for homes, apartments, churches, bedrooms of hotels, and the like, there isn't a more satisfactory flooring than CROMAR. "Laid and Used the Same Day" is only one of the ten outstanding advantages.

The CROMAR method of driving the filler deep into all the pores of the wood, with patented machines, results in a finish that has no equal for beauty and long wear. Except under extreme conditions warping and drying-out is eliminated with CROMAR because of the moisture-resisting treatment it receives.

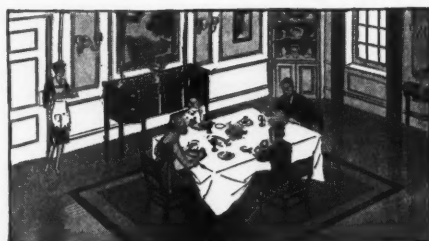
A flexible V-type tongue and groove makes for easy and speedy laying and permits laying over uneven sub-floors. Nail-holes are punched. And the beveled tongue prevents damage in nailing.

A tiny, rounded surface seam—smaller than the shaft of an ordinary pin makes cleaning easy and prevents square cracks to pack with dirt.

CROMAR arrives on the job *CRATED*—not merely bundled—in compact, easy-to-handle packages—one length to a package. You do the job all yourself—no subletting!

Send for complete literature which tells and illustrates these and additional CROMAR advantages in detail.

In the evening of the same day—the last nail driven and the new CROMAR Floor in use.



Completely finished at the factory—scraped, sanded, filled, varnished {2 coats}, polished and TREATED to RESIST MOISTURE—that's CROMAR, the only FACTORY FINISHED oak flooring in the world

Because CROMAR, like furniture, is completely finished at the factory, all there is left for you to do is to nail it down!

That means that any two carpenters can lay an average-size room in a day. Think of it! No exaggeration about that either. And it makes no difference whether it's a relaying job or a new building.

When you sell CROMAR for relaying an old dining room floor in a residence, for instance, you can positively promise the owner that there'll be none of the usual mess and turmoil in her house; that they can have breakfast in the room as usual and that the new floor will be all laid and ready for use by dinner-time in the evening.

That one CROMAR advantage alone will get you many a relaying job where you wouldn't have look-in with any hand-finished flooring. And you save a lot of time which you can use to take on other jobs!

THE CROMAR COMPANY
Williamsport, Pa.



CROMAR
Oak **FACTORY FINISHED FLOORING**

Write for free samples and complete literature concerning the manufacture, the selling and laying of the only FACTORY FINISHED hard-wood flooring in the world.

The Widespread Demand for Outside Icing

is Reflected in Plans for New Homes and Apartment Buildings

MORE and more, architects and builders are being called upon to include proper wall openings for servicing "Outside Icers," the new type of refrigerators which are becoming increasingly popular with housewives.

Refrigerator manufacturers supply "Outside Icers" at only a slight advance over the price of regular models.

It is a very simple matter to provide for this added convenience when plans are in the blue print stage. A number of refrigerator manufacturers are glad to supply the necessary blue prints, which will insure correct construction and placement of wall opening and door. Your clients will appreciate your forethought in providing for Outside Icing. It is coming to be recognized as one of the essential features of a thoroughly modern house or apartment building.

The demand on the part of housewives for Outside Icing facilities is re-



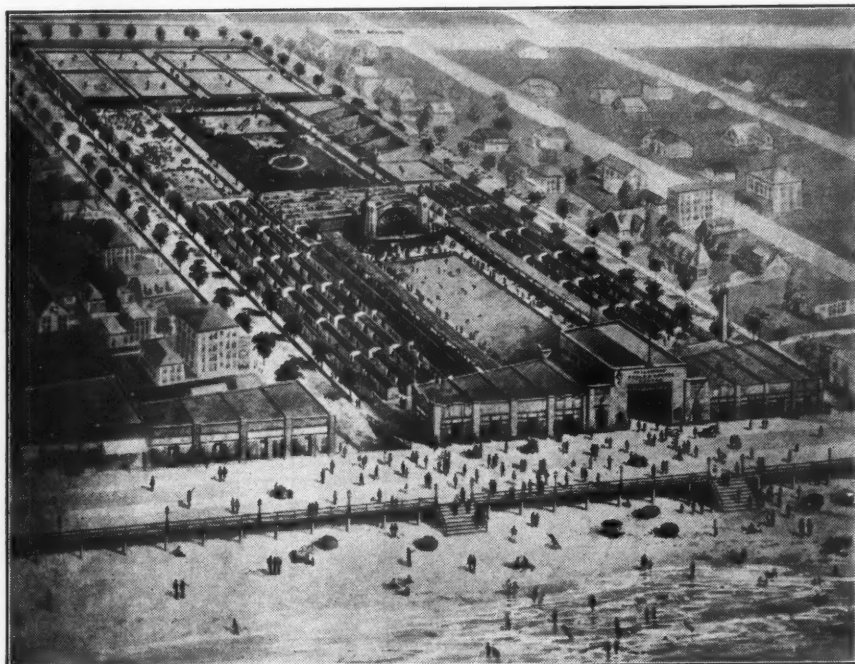
sponsible for including this feature in a great many plans for remodeling old buildings.

NATIONAL ASSOCIATION OF ICE INDUSTRIES

163 WEST WASHINGTON STREET, CHICAGO, ILL.

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

"Rush 14 Carloads of Eternit Products to 'Sportland'"



Wm. Lipkin, Owner; Edward C. McGarry, Builder; Magaziner, Eberhard & Harris, Architects

"Sportland," the new amusement project at Wildwood, famous New Jersey seashore resort, orders 100,000 sq. ft. of Eternit Asbestos Lumber, and 33,000 sq. ft. of Eternit "Big-Seven" Corrugated Roofing — to build 2600 dressing-rooms!

A SWIMMING pool at a seashore resort! There's a venture for you! And in addition to the swimming facilities — handball, tennis, basketball courts, an outdoor gymnasium, boxing ring and track. All gathered together in one huge enclosure.

To care for the tremendous crowds, 2600 dressing-rooms must be built. And to build the 2600 dressing-rooms, a total of 133,000 square feet — 14 carloads — of Eternit Asbestos Cement products have been ordered. For the walls and partitions of bath-houses and lavatories — Eternit Asbestos Lumber. For the roofs — Eternit "Big-Seven" Corrugated Roofing.

Never need painting

Economy dictated the choice of Eternit products. Not first purchase economy, but *permanent* economy! No paint will be needed. Salt air cannot harm Eternit products. Vermin cannot get through the walls, for unlike wood, Eternit products will not rot. All the cleaning and washing out will be done with a hose.

The bath-houses will be absolutely fire-proof, of course. No seashore fires here! Eternit Asbestos products can't burn. The hard, tough surface is scientifically formed by even distribution of asbestos fiber through Portland cement.

Eternit

Asbestos Shingles too

In addition to the Lumber and the Corrugated, Eternit Asbestos Shingles are also famous at seashore resorts. They have gained a wide use — not only for roofing, but for siding on homes. Made of exactly the same materials as the other two products, Eternits are fire-proof, rot-proof, durable — and colorfast. The five colors — Emerald Green, Indian Red, Autumn Bronze, Quarry Blue, Colonial Gray, and a combination of five special colors, Heatherblends — by an exclusive Eternit process, will never fade or bloom. Three methods of application: American, Hexagonal and the exclusive Eternit Horizontal.

Let us tell you more about these Eternit Asbestos products. Mail the coupon for further information. Address Eternit, Inc., Philadelphia, Boston, Houston, New Orleans, Jacksonville, St. Louis. Factory at St. Louis.

Eternit

Reg. U. S. Pat. Off.

ASBESTOS SHINGLES, ASBESTOS LUMBER AND
BIG-SEVEN CORRUGATED ASBESTOS SHEETS

ETERNIT, Inc., Dept. A, 15th and Locust Sts., Philadelphia, Pa.

Please send me full information on:

☐ Eternit Asbestos Shingles

☐ Eternit Asbestos Lumber

☐ Eternit "Big-Seven" Corrugated Roofing and Siding

Name _____

Street _____

City and State _____

Dealer's Name _____

Quick Profits for Builders

Nation Wide Campaign of "MASTER MODEL HOMES" Teaches a Timely Lesson of Better Building, Consumer Approval, and Profitable Sales for Builders

Rust-Proofing is Good Business

Selling Experiences of Prominent Home Builders Show Buyers Willing to Pay for Copper, Brass and Bronze

By BERNARD L. JOHNSON,
Editor, American Builder

THE day that the home owner peers into his morning tub and sees a brown-red stain pollute the water is a bad day for the builder of that structure, for the offensive color means that this house has not been rust-proofed, and the unfortunate owner will complain long and loudly, according to L. Porter Moore, President of the Home Owners' Institute. The Institute is engaged in raising housing standards throughout the country by constructing model demonstration dwellings in carefully selected population centers.

Rust, says Mr. Moore, is a red-eyed monster that ravages the house in which the use of copper, brass and bronze has been omitted, and runs up a bill of \$575,000,000.00 a year against American home owners, who are beginning to look to their builders for explanations.

And, as the builder's best future prospects are the friends, neighbors, and relatives of people for whom he has built houses in the past, the time has come when he must do his share to cut down on this tremendous loss, says the Institute president.

"The builder who uses rust-proof materials not only insures his houses against costly repairs that make enemies of buyers, but provides himself with sales arguments more sentimental than a description of the view from the dining-room windows.

"Talk to a woman prospect about the health of her babies and you have a sales argument that cannot be equaled. Tell her that the house she

is inspecting has been equipped with brass pipe and that, therefore, the water her children drink will not be polluted with rust, and you have told her something that will interest her.

"Rust-proofing includes the use of copper gutters, downspouts, and flashings for the roof, brass pipe for the plumbing, brass or bronze hardware, brass-plated plumbing fittings, and bronze screens and electrical equipment, including the wiring system which is always of copper.

"In discussing the value of using rust-proof materials, let us consider first the roof, taking the house from the outside and progressing to the interior.

"The flashings, downspouts, and gutters are vital installations in the roofing scheme and are required to stand harder service than any other part of the roof. They are subject to greater corrosive influences and service strain at vital points, than the main expanse of the roof. The failure of the flashings, downspouts, and gutters to stand up under service conditions means the failure of the entire roof or the roof drainage system.

"There is no more frequent cause of roof failure than rusty flashings. Usually unnoticed, flashings of non-rust-proof material rust and wear away. The resulting leakage into the house interior causes costly damage. The non-corrosive properties of copper prevent copper flashings from rusting and save the home owner great trouble and expense.

"Copper flashings, downspouts, and



This Copper Leader Head Dates Back to 1785 and Has Given Perfect Service for Many Generations.



This Interior of a Master Model Home Sponsored by the San Francisco Chronicle Indicates to What Great Lengths Local Furniture Stores and Their Interior Decoration Departments Will Go Toward Co-operating with Realtor-Builders to Dress Good Construction with Good Furnishings to Promote Profitable Sales.

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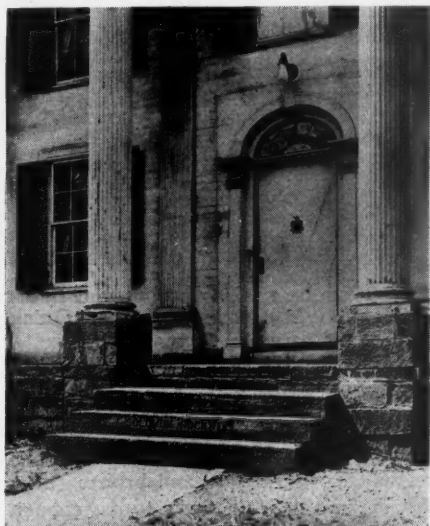
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gutters will last as long as the building stands, but those made of ordinary metal serve well if they last three years. The cost of erection is the same in both cases and the difference in initial cost is absorbed by the house owner before the first replacement of the rusty, wasteful gutters.

"In the interior of the house, the use of brass pipe for the plumbing alone, under ordinary conditions, saves an average of \$30 a year in repairs on a \$15,000 house. Of course, if bad leaks occur from the use of iron pipe, this figure is raised by hundreds of dollars for the renovation of damaged walls and ceilings.

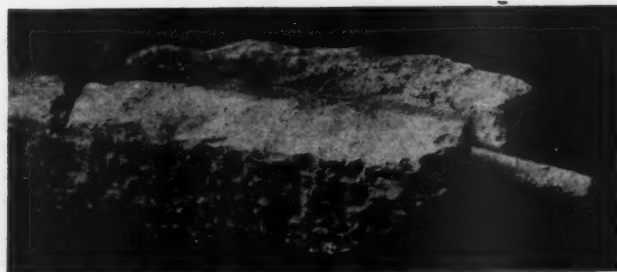
"Non-rust proof pipe not only costs the home owner large sums for repairs, but it impairs the health of his family and cuts down on the efficiency of his home. It is not long after the installation when ordinary pipe begins to emit rusty water; and rusty water means polluted drinking water, unsavory bath water, bad laundry water, and stained tubs and basins.

"And as the rust clogs the iron pipe, the flow of water is diminished little by little until it is cut off entirely.



Brass Door Hardware After Long Service;
House Built in 1813.

Then the walls and floors of the unfortunate house have to be torn away and the pipe replaced. Moreover, it is



Copper Pipe from Ancient Egypt, Actually 5,700 Years Old
and Still Serviceable for Clean Flow of Water.

not uncommon for this to occur when a structure is a scant three years old.

"The agencies of corrosion contained in water include oxygen, carbonic acid, and chlorine, all of which exert their influence on the life of the pipe and shorten it, especially in hot water lines. Brass pipe is not subject to this attack on a comparable basis with iron or steel.

"It is for this reason that brass pipe does not have to be as large as iron pipe to carry the same flow of water. The rough surface of the iron pipe retards by friction the flow of a stream of water. Brass pipe is smooth inside and it stays smooth; for this reason a small brass pipe will do the work of a big iron pipe.

"There is a hotel in Boston that was completed in 1856 and equipped throughout with brass pipe. The chief engineer of this hotel is responsible for the statement that the only plumbing repair made in 67 years in this building was the replacement of a short section of pipe that was broken because one of the employees did gymnastics on it.

"Pipe and pipe fittings constitute barely 10 per cent of the cost of the entire plumbing installation. Yet upon them depends the useful life of the entire plumbing system.

"Rust is the cause of most leaks. It eats its way through iron or steel pipe, leaks follow, and new walls and ceilings and furnishings deplete the family savings.

"In the matter of hardware, too, the use of brass or bronze provides the builder with a feature about which much can be said. There is no other detail of construction that is given such hard and constant use as the hardware. No other detail is so noticeable if corroded as the hardware.

Doorknobs or wall plates used for light push buttons are subject to the constant touch of moist hands. Metal that cannot defy corrosion speedily succumbs to the rusting effect of this moisture and plating is but a short lived protection. Then there is the moisture in the atmosphere. It, too, has a corrosive effect in the early deterioration of materials other than brass

HOME OWNERS INSTITUTE, Inc.

1927-28

Construction Progress

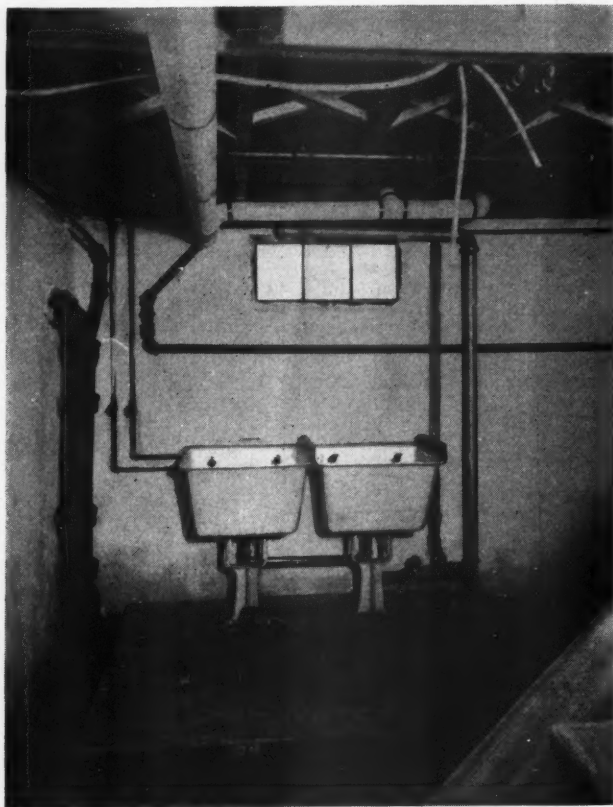
City	Realtor-Builder	Opening Date	Model Homes Built or Con- Under tracts Way Signed	Additional Homes Built or Con- Under tracts Way Signed	To- tal	Newspaper
Fall of 1927						
*Los Angeles	Miramar Sales Co.	May 13, 1928	1		1	Times
*Portland, Ore.	Henderson-Bankus Co.	Jan. 29, 1928	1	9	10	Oregonian
*San Francisco	Baywood Park Co.	Jan. 8, 1928	1		1	Chronicle
*Summit, N. J.	Combined Capital Corp.	Sept. 18, 1927	1	5	4	10 Herald Tribune
*Washington, D. C.	M. & R. B. Warren	Oct. 22, 1927	1	15	16	Star
Spring of 1928						
Wood-Ridge, N. J.	Reis Const. Co., Inc.	April 15, 1928	1	250	251	Herald Tribune
*Washington, D. C.	Aurora Hills Homes, Inc.	July 15, 1928	1	9	10	Star
*Washington, D. C.	L. E. Breuninger & Sons	Aug. 19, 1928	1		1	Star
*Washington, D. C.	Kennedy-Chamberlin Dev. Co.	Sept. 16, 1928	1		1	Star
*Washington, D. C.	Boss & Phelps	Oct. 14, 1928	1		1	Record
Philadelphia, Pa.	McWilliams & Meloney	April 22, 1928	1		1	Star
Philadelphia, Pa.	Phila. Record-Fremont	July 15, 1928	1		1	Record
*Cleveland, Ohio	Sykes & Thompson Co.	Sept. 16, 1928	1	9	10	Plain Dealer
*West Englewood, N. J.	J. E. B. McDonald, Inc.	June 24, 1928	1	9	10	Herald Tribune
Philadelphia, Pa.	McWilliams & Meloney	Sept. 9, 1928	1	6	7	Record
White Plains, N. Y.	Joseph Spadaro	May 6, 1928	1	9	10	Demo. & Chronicle
*Rochester, N. Y.	Fred P. Tosch	Sept. 20, 1928	1	2	3	Free Press
*Detroit, Michigan	Shannon McKinnon	Sept.-Oct.	1	2	3	Free Press
*Detroit, Michigan	McGivern-Haldeman Co.	Sept.-Oct.	1	2	3	Free Press
*Detroit, Michigan	John Ward Howland	Sept.-Oct.	1	2	3	Free Press
*Detroit, Michigan	Indianwood Land Co.	Sept.-Oct.	1	2	3	Free Press
*Detroit, Michigan	(Builder not yet selected)		1	2	3	Courier Express
Buffalo, New York	Lewis Mitchell	April 29, 1928	1		1	Herald Tribune
Great Neck, L. I.	Russell Gardens, Inc.	June 3, 1928	1		1	Herald Tribune
*Syracuse, N. Y.	Lane & Goes	Nov. 1, 1928	1	4	5	Post Standard
*Garden City, L. I.	Realty Associates	Aug. 19, 1928	1	9	10	Herald Tribune
*Buffalo, New York	Corfar & Corfar	Oct. 14, 1928	1	4	5	Courier Express
			19	8 279	71 377	

*Denotes Master Model Homes.

Several builders negotiating for this Master Model Home.

Note: Reis Construction Co., Inc.—Wood-Ridge, N. J., have sold 75 houses from date of opening to closing date.





Brass Piping in the Basement Laundry of the Master's Model House Built at West Englewood Hills, N. J.



Copper Eave Trough and Downspout and Bronze Window Hardware Make the Master Model Houses Quickly Salable.

or bronze.

"Non-rust-proof hardware when used on the outside of a house or garage will rust and streak the paint with ugly stains.

"Entirely aside from the practical reasons for using copper, brass and bronze is the fact that these materials add touches of real beauty to the house in which they are used. Dull bronze doorknobs and hinges enrich a mahogany door. Gleaming brass wall plates, doorknobs and handles give an expensive look to any interior.

"The builder of the future cannot go very far without copper, brass and bronze. Without copper wiring, there could be no homes electric and the public could not use the great array of appliances and labor-saving devices, the vital parts of so many of which are made of copper. The best electric lighting fixtures also are made of brass, bronze or copper.

"One of the latest pieces of house equipment to be placed on the market is the brass plumbing fittings with a chromard finish that will not tarnish or corrode even when exposed to unusually severe conditions, such as salt air, salt water and most acids.

"The manufacturers of these fittings realize that home owners of the future are less likely to put up with corroded and tarnished equipment than the home owners of the

past. The public is learning about rust proofed homes and the public is seeking such homes.

"All of the Home Owners' Institute master model demonstration houses are rust proofed homes, electric, equipped throughout with copper, brass and bronze (using flashings, gutters, downspouts of Anaconda 16 oz. copper, Anaconda brass pipe for hot and cold water system, and Anaconda bronze screens, the American Brass Company; brass or bronze hardware, McKinney Manufacturing Co.; and brass plated plumbing fittings, the Standard Sanitary Co. Copper is also used by the Institute on its demonstration homes for dormer window decks, side roof decks, and entrance vestibule decks).

"The builders of the Institute houses have found that rust proofed homes sell more readily than homes that are not rust proofed. Buyers lend a ready ear to a discussion of rust proof features. The American people are tired of bathing in rust-red water and they are tired of holding their fingers in the leak until the plumber comes. Most of all, they are tired of paying out thousands of dollars for the builders' lack of foresight.

"Builders should heed this and help themselves to glory by erecting rust proof homes."

The Master Model Homes for 1928, supervised by the Home Owners' Institute, feature the following quality materials which assure quick profits for the builders:

Anaconda Brass Pipe, Gutters, Rain-Pipes, and Flashings of Anaconda Copper, Screens and Anaconda Bronze Wire—THE AMERICAN BRASS COMPANY.

New Ideal Boilers, New Ideal Hot Water Heaters, Corto Radiators—AMERICAN RADIATOR COMPANY.

Common Brick—COMMON BRICK MANUFACTURERS' ASSOCIATION OF AMERICA.

G-E Wiring System, G-E Refrigerator, G-E Vacuum Cleaner, G-E Fans—GENERAL ELECTRIC COMPANY.

Rigid Asbestos Shingles; Improved Asbestocel Pipe Insulation—JOHNS-MANVILLE CORPORATION.

Tiger Finish (Hydrated Lime) Walls; Lime for Plastering and Brick Mortar—THE KELLEY ISLAND LIME & TRANSPORT COMPANY.

Kernerator Chimney-Fed Incinerator—KERNER INCINERATOR COMPANY.

Forged Iron Hardware, Hinges—MCKINNEY MANUFACTURING COMPANY.

Metal Lath for Better Plastering—NATIONAL COUNCIL FOR BETTER PLASTERING.

Miracle Doors—PAINE LUMBER COMPANY, Ltd.

Plumbing Materials—STANDARD SANITARY MFG. CO.

Cephas B. Rogers' Decorative Lighting Fixtures—CEPHAS B. ROGERS, Inc.

Truscon Steel Casement and Basement Windows—TRUSCON STEEL COMPANY.



If It Saved You Money!



TRUSCON STANDARD **CASEMENTS** MODEL NO. 5

and These Casements Do!

The public has learned the extra value in the permanence and beauty of steel casement windows. As a builder you are now constantly meeting a demand for steel casements and we feel that in your own work you would favor the use of the Truscon Casement if we could show you that it saved you money.

Truscon Casements Model No. 5 are a new and distinctive type of steel casement available in factory-built single and combination units. They are delivered to you complete, ready to fill the opening, and can be set up in place for the glazier with a minimum of field labor. There is no question of the economy these windows represent to the builder.

TRUSCON STEEL COMPANY, Youngstown, Ohio

Established 1903

Warehouses and Offices in all Principal Cities.



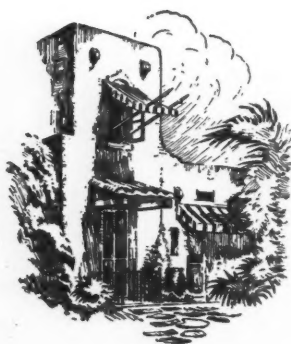
The Bathroom – a powerful

Now, for the first time, opportunity is given for the complete planning of the artistic treatment of the home and apartment. By the individual grace of their forms, the new "Standard" Plumbing Fixtures and Fittings make it possible to have a bathroom in fine accord with the architectural style of the home and decorative treatment of the other rooms.

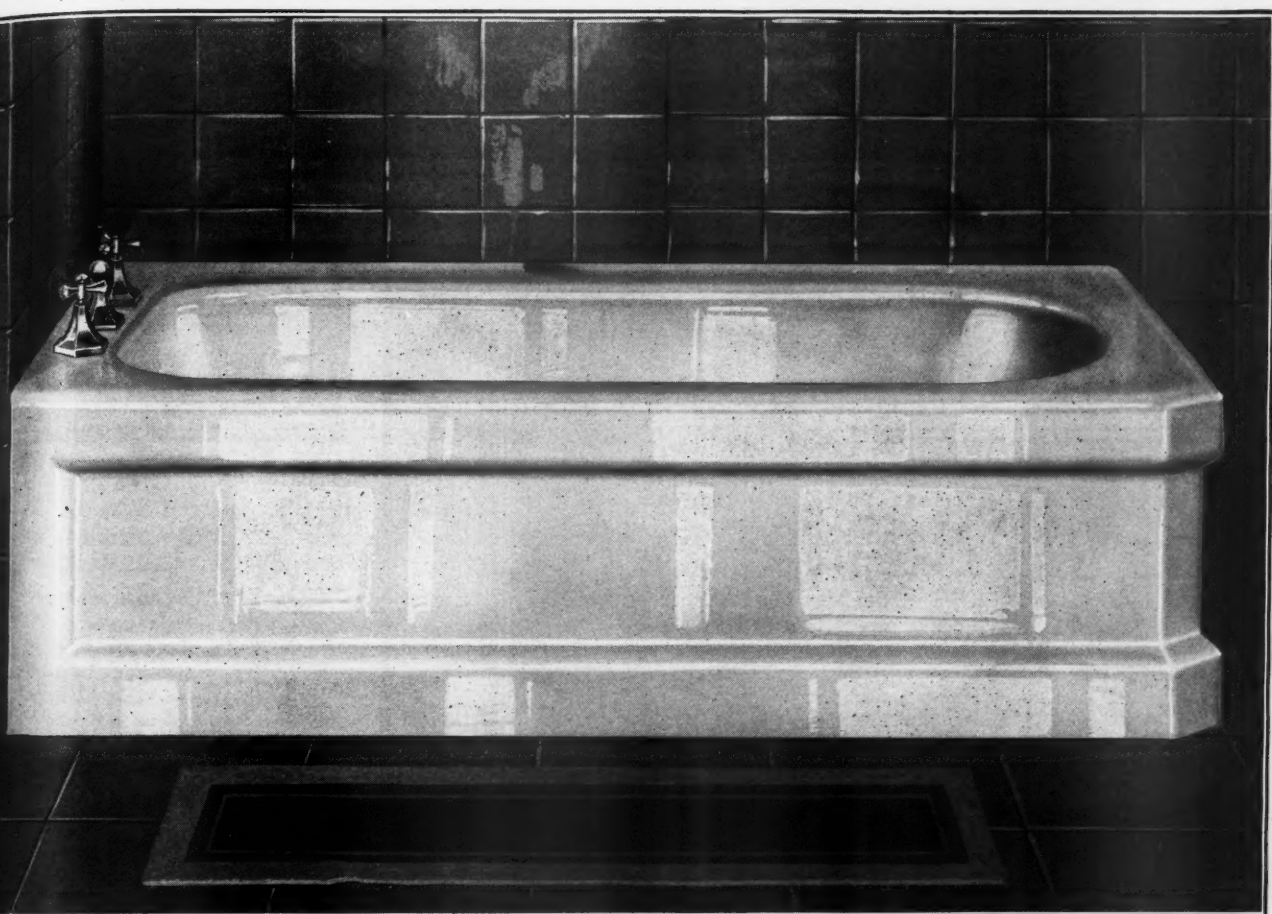
The bathroom may now be included in the plans for building or remodeling with the assurance that it will be in perfect harmony with the scheme entire. This is a feature which will appeal to every prospective tenant and home-buyer—and one that will prove instrumental in closing the sale or lease.

The illustration presents one of the many charming designs by distinguished artists inspired by "Standard" exclusive developments in bathroom appointments. Here the proper fixtures are composed before an old-world background—twisted columns of the later Romanesque—groined vault ceiling—old, jewel-like Venetian star lantern.

The walls are in soft golden brown with splashes of color bringing into effective relief the beautiful "Royaltan" Bath, the "Templeton" dressing table lavatory and other fixtures. Contrast the living warmth of this ensemble with the monotonous austerity of the bathroom of yesterday.



"Standard"
PLUMBING FIXTURES



...selling feature in any home

The beautiful, one-piece, Acid-Resisting enameled "Royalton" Bath is a great advance in bath design. In both the corner and recess patterns, the "Royalton" will be instantly chosen for its artistic lines and unusual spaciousness. Its straight, paneled sides, its wide rim, its unusual breadth at the bottom, which is flat, all these features make the "Royalton" the most suitable fixture for bathrooms in distinguished homes and apartments.

The over-all width is $36\frac{1}{4}$ inches—six inches wider than the average bath—a feature that will appeal to the majority of your customers. It is supplied in one length only— $5\frac{1}{2}$ feet. The flat rim is $4\frac{1}{2}$ inches wide, except at fitting end, where it broadens to a width of $5\frac{1}{2}$ inches.

Because of the unusual width of the "Royalton," the through-the-rim fittings have a spread of 14 inches. Through-the-wall fittings, which can also be supplied, have a spread of 11 inches. These fittings are in the new and beautiful hexagonal Mastercraft design, hand wrought and with Chromard finish.

Today, when so many homes are bought or rented largely because of the beauty of the bathroom, the alert, broad-visioned builders and contractors are installing new styled "Standard" Plumbing Fixtures.

The new book "Standard" Plumbing Fixtures for the Home describes these new and distinctive fixtures and illustrates many original bathroom designs. Write for your copy.

Standard Sanitary Mfg. Co.
PITTSBURGH



C O L O R

"Standard" Plumbing
Fixtures are available
in several beautiful col-
ors as well as in black
and in white



"Standard"
PLUMBING FIXTURES



Quick Sales and Lasting Satisfaction

PROGRESS



The **PAINÉ** **Miracle** Door

A Miracle of Strength and Beauty
PAINÉ LUMBER COMPANY, Ltd.

OSHKOSH, WISCONSIN.

Away with Garage Door Troubles

LOCKING and unlocking some garage doors has become as complicated as operating the doors of a Safe Deposit Vault in a National Bank . . . locks, bolts, padlocks, chains, catches, tracks, tripping devices and whatnot.

McKinney Quicklock is as welcome as flowers in Spring to a garage-weary public—and the hardware trade, too.

Here is a latching bolt for garage doors that swing out which operates complete with a simple twist of the wrist. Cylinder Lock and Bolts operate on a single turn of the key. It is quick to open, quick to close and can be completely attached in a matter of minutes.

Locks automatically and securely—When the key is removed the Quicklock is in locking position—thus when the doors are closed again the garage is automatically locked. The Quicklock is placed

on the active door which closes against two steel plates fastened to the inactive door and which act as an astragal or stop. Quicklock is operated by a five-pin-tumbler cylinder with a paracentric key. The lock can be furnished without the cylinder and is arranged so that any standard cylinder can be used.

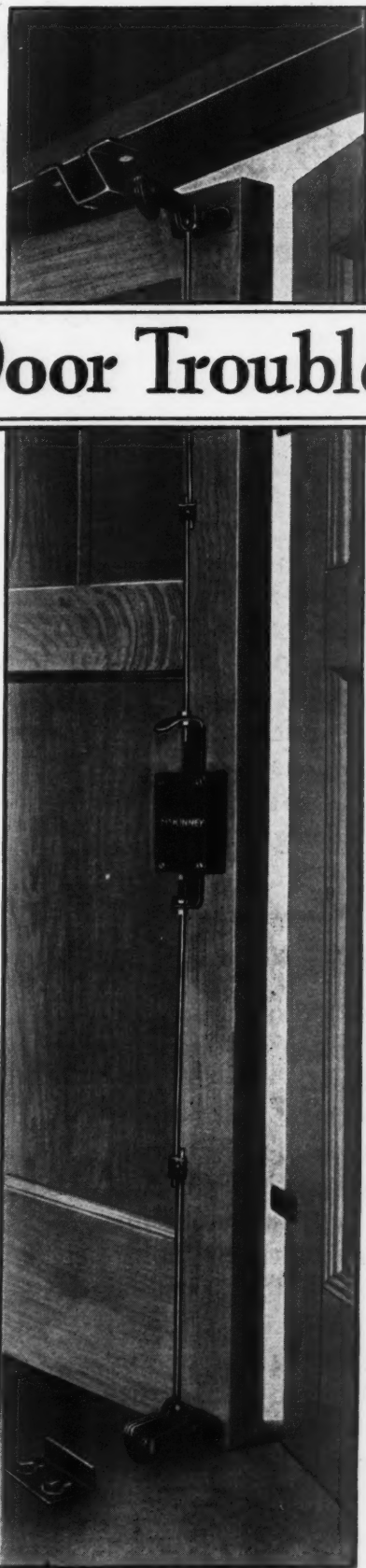
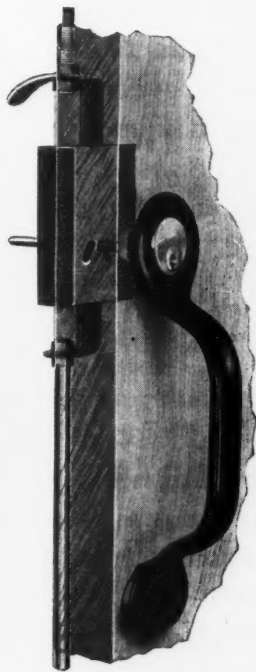
With Quicklock the doors can be unlocked from the inside without the use of a key—merely lift the inside handle. The top and bottom gripper pawls are protected so that the lock cannot be released by any instrument from the outside.

No springs. Nothing to get out of order—The construction is strong and rugged. There is no weak spot.

No service door necessary—The opening and closing of the main door is as easy as the operation of a service door. For this reason the expense of a service door can be saved.

Send for literature on the Quicklock. It is the solution to the complete locking of a garage—all in one compact unit. Write

McKINNEY MFG. COMPANY
Pittsburgh, Pa.
OFFICES IN PRINCIPAL CITIES
*Makers of McKinney Hinges and
Forged Iron Hardware*



McKINNEY

Quicklock

Don't miss this!

Have you seen the McKinney "Non-Mortis" Butt-Hinges which hang a door in ten minutes? Builders everywhere are flocking to it. Better send for the Data Sheet today. Same address.

Quality refrigeration can turn prospects into buyers

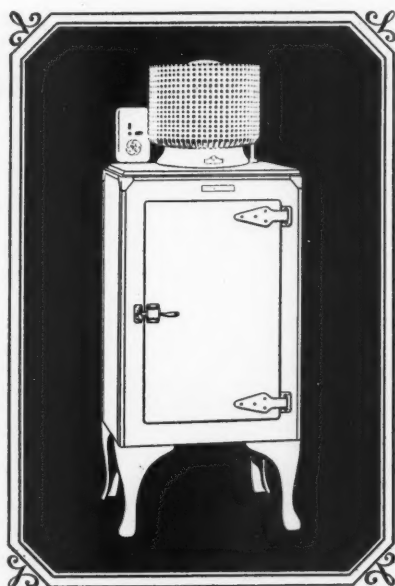
—this "years ahead" refrigerator has an unusual sales appeal



ONE of the strongest selling points you can give a house is the lasting comfort and economy of a General Electric Refrigerator. It is the one refrigerator that is radically different from all others in its construction, its operation . . . and its results. It is indeed "years ahead" in design.

Architects are specifying them

The better architects and the most progressive builders, after carefully considering all electric refrigerators, have chosen the General Electric. The prestige of the General Electric Company is one important factor in their choice. They know that any product which is the result of fifteen years of research in the General Electric laboratories must be most efficient in operation.



This is the new de luxe apartment house model . . . finished in porcelain, inside and out. It has the same mechanical perfection as the larger models. While only 24 inches wide and occupying but 3½ square feet of floor area, it has 6 square feet of food storage space.

They are influenced, too, by its revolutionary simplicity. There is no expensive installation cost. The General Electric Refrigerator is installed by plugging it into any convenience outlet. No plumbing, soldering or extra wiring is needed. It is *unusually* quiet. All its mechanism is enclosed in an air-tight steel casing—forever safe from dust and difficulties. It is completely assembled and tested in the factory.

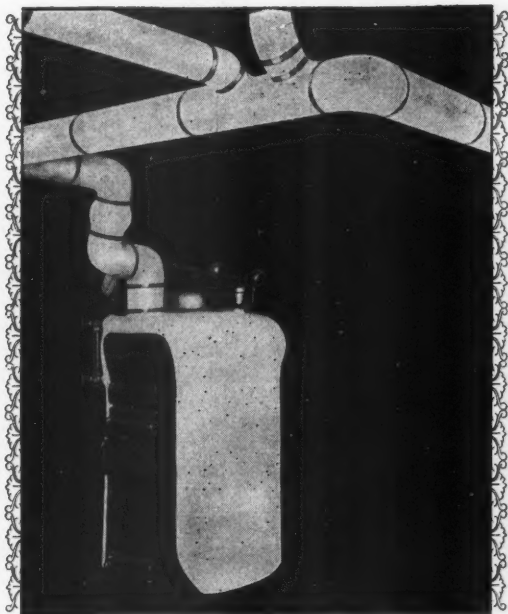
Send for Architects Handbook AB7

To get an idea of the wide range of models—the various sizes and finishes—just send for Architects Handbook AB7. It gives complete specifications of these refrigerators which are developed, made and guaranteed by General Electric.

GENERAL ELECTRIC Refrigerator

ASBESTOCEL

A NATIONALLY STANDARDIZED
INSULATION FOR HEATER PIPES



The choice of insulation for heater pipes is exceedingly important, yet the decision is easily made. Improved Asbestocel is the low-pressure pipe insulation which is nationally sold and which is standard in quality and performance everywhere. When you select 3-ply Asbestocel you know that the performance and the appearance of the insulation will be the same wherever the building is located, whatever its size is, and whoever makes the application. There is no other heater pipe insulation which offers you such standardization.

National advertising in general magazines, building papers and other trade papers, keeps Asbestocel before the public. Individual house owners know the name and will have confidence in your homes when they see Asbestocel.

Asbestocel is a product of Johns-Manville, pioneer workers in Asbestos. It is guaranteed by Johns-Manville to be stronger and more efficient than any of the ordinary air cell insulations.

Another Asbestos product of especial interest to builders and operators is the Johns-Manville Asbestos Shingle. By using these Shingles you can obtain any textures and colors you want, besides which the roof will be fireproof and literally permanent.

Johns-Manville maintains a large department for the purpose of cooperating with builders on many problems connected with designing buildings of all types. We invite your inquiries, which entail no obligation. Address: Johns-Manville Corporation, Building Department, 292 Madison Avenue, New York City.



MASTER of ASBESTOS
Johns-Manville
IMPROVED ASBESTOCEL

"Tiger Finished" homes sell easier!



The Tiger on
the bag is your
protection

THERE is an intrinsic value to a home finished with Tiger Lime that is unobtainable with just ordinary plaster.

Because Tiger is universally accepted as a superior material, its use adds to the real value of a home without increasing its actual cost.

The illustrated Seattle Master Model Home, sponsored by the Seattle Times and built by the Long Building Company, was Tiger Finished.

So will be all of the other 360 Model Homes constructed throughout the United States this year by the Home Owners Institute.

The Kelley Island Lime & Transport Company
"World's Largest Producer of Lime"
Cleveland, Ohio

The Famous

TIGER

FINISH

And—Tiger Mason's Tiger Agricultural, Tiger Chemical, Tiger All-Purpose Hydrate in 10-pound Packages, and High Calcium and Magnesium Lump Limes. Also Quicksake (ground Quicklime) in paper-lined jute sacks.



Official Survey Proves Economy of Common Brick

Analysis of 14 comparable types of wall construction shows surprising results!

Once and for all the economy of the common brick wall has been definitely settled. Not by brick makers. But by 'The Architects' Small House Service Bureau which sponsored the investigation.

solid brick wall of face brick backed with common brick cost \$1,224. A solid wall of common brick alone would have cost only \$1,094, cheaper than any of the 14 types considered!

In July, 1927, a committee representing the Lumber, Cement, and Brick interests in Denver selected a standard bungalow on which to submit competitive figures. Only exterior wall costs were studied, since the interior would be the same.

This is the first recorded instance where three material interests agreed to such a survey. The absolute economy of Common Brick can no longer be questioned.

BRICK forever

PREFERRED BY ARCHITECTS

On the same specifications, a standard frame wall with lap siding, painted, cost \$1,112. A

For full details of common brick structure and its economy write today for "The Advantages of Common Brick." It is sent free.

COMMON BRICK MANUFACTURERS ASSOCIATION of AMERICA

Jul-2131 GUARANTEE TITLE BLDG., CLEVELAND, OHIO

These District Association Offices and Brick Manufacturers Everywhere Are AT YOUR SERVICE

Boston 11 Beacon Street	Norfolk . . . 112 West Plume Street
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Check coupon below—send cash or stamps to nearest office—

- ☐ Homes of Lasting Charm—25c
- ☐ Skintled Brickwork—15c
- ☐ Multiple Dwellings of Brick—10c
- ☐ Farm Homes of Brick—5c
- ☐ Brick, How to Build and Estimate—25c
- ☐ The Heart of the Home (Fireplaces)—25c

Check above books wanted or send \$1.00 for all of these books.



No/ Garbage Cans !in the Modern Home!

GARBAGE cans have no place in the modern home! So decided Mr. Adolph Dehner, Hollyhill, St. Louis, and his architect, Charles Thurston, in drawing the Kernerator into the plans of the attractive home illustrated above.

This decision, fast becoming definite and final with architects, builders and owners of modern homes, in all parts of the country, was also the decision of the Home Owners' Institute, building a series of 360 Model Homes in 30 principal cities throughout the country, in a nation-wide campaign for better homes.

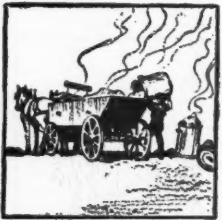
These modern, model homes will be featured in leading local newspapers, visited by thousands upon thousands of people, will be read about and talked about. These thousands will discover for themselves what upwards of 3,000 architects and builders already know: that KERNERATOR is the time-tried, highly satisfactory and modern method of garbage and waste disposal.



No more trips to garbage can through rain or snow.



Provide a clean back yard where children can play.



Be independent of the foul smelling garbage wagon and infrequent collections.

Costs Nothing to Operate

The Kernerator is built into the base of the regular chimney, with a separate flue, having hopper doors located in or near the kitchen. All waste—not only garbage, but tin cans, bottles, papers, all discarded trash—is dropped through the handy hopper door and falls to the brick combustion chamber in the basement. An occasional lighting (a match does it) burns everything but metallic objects and such non-combustibles, which are flame-sterilized for removal with the ashes. No gas or commercial fuel of any kind is used—the waste itself is fuel for its own destruction.

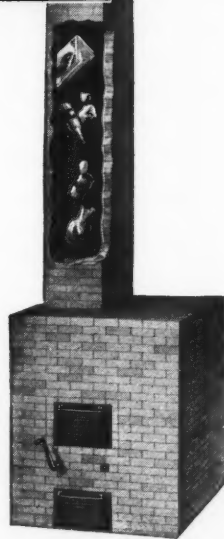
The beautiful homes you build also deserve something better than the out-of-date garbage cans—a tiresome, unsanitary method of garbage disposal that should have disappeared with the outdoor pump. The convenience and satisfaction assured by the Kernerator will do much in creating good-will among your clients.

Write for complete information and prices or phone your local Kernerator representative. Offices in 89 cities. Data carried in Sweet's 22nd Edition.

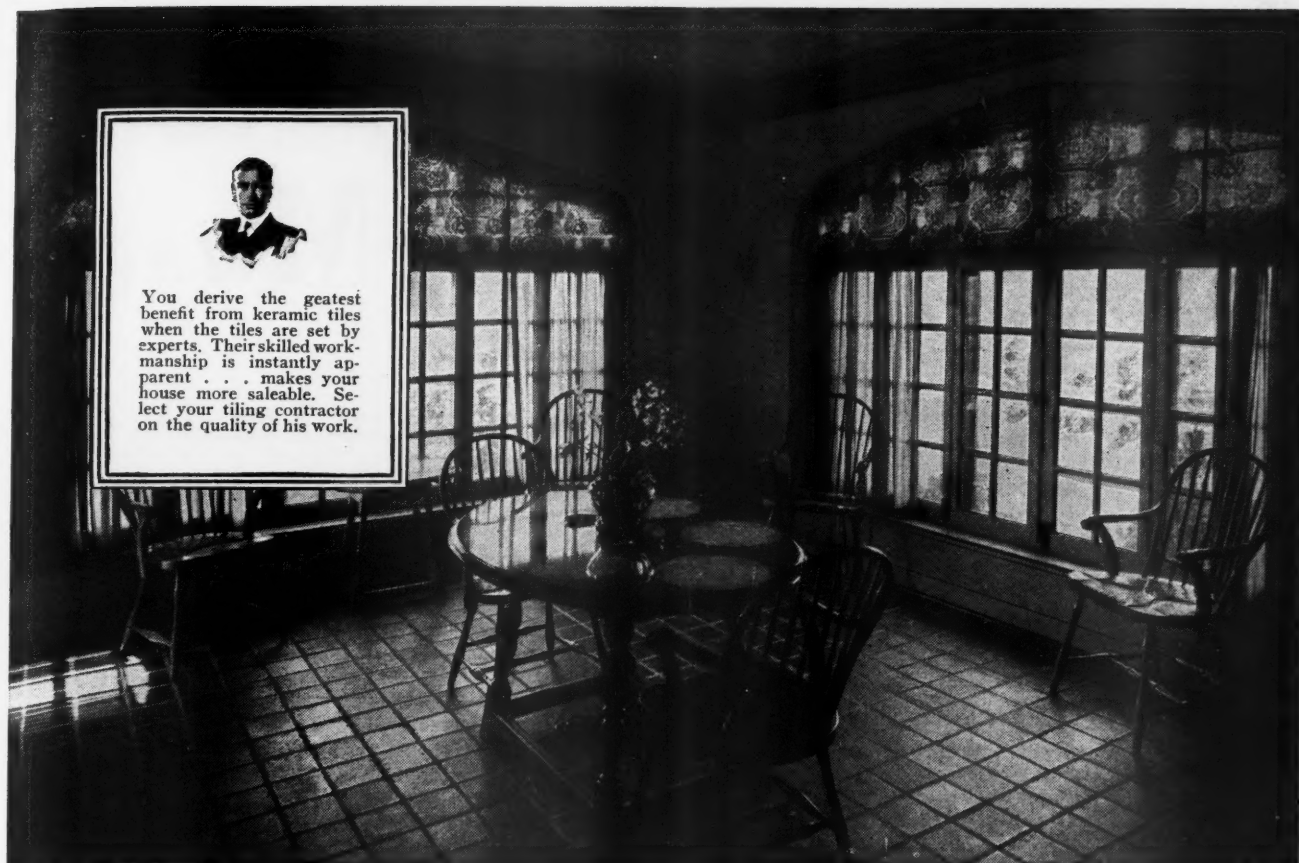
KERNER INCINERATOR COMPANY
753 E. Water St. Milwaukee, Wis.

KERNERATOR
REG. U.S. PAT. OFF.
THE CHIMNEY-FED INCINERATOR

*Garbage and Waste Disposal
without Leaving the Kitchen.*



Kernerator residence models as low as \$95, and the masonry costs but little more when regular chimney is used.



They know you have built a Home for them when you use this material

WHEN you offer home buyers more than they expect to find, they decide quickly—in your favor. Ceramic tiles—real tiles—give to houses an extra home-like touch which wins buyers instantly.

Home buyers know that real tiles out-wear all substitutes, that they never fade, that they clean easily. And they give to rooms the brightness and cheerfulness that captures a prospect's fancy, makes selling easier and brings you price.

You can put tiles to work for you in many places . . . not only in the bath-

room, but also in the kitchen, the breakfast room, the dining room, the sun porch, the stairs. There are countless opportunities to build the best of sales arguments into your houses with ceramic tiles.

The cost of tiles more than comes back to you in the higher prices you get for your houses. In the end, tile costs you less than substitutes. Consult your local tiling contractor.

ASSOCIATED TILE MANUFACTURERS
420 Lexington Avenue, New York, N. Y.

ALHAMBRA TILE CO.
AMERICAN ENCAUSTIC TILING CO., Ltd.
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UNITED STATES QUARRY TILE CO.
WHEATLEY TILE & POTTERY CO.
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K E R A M I C T I L E S



Prize design by Amedeo Leone, Detroit, "The Indianwood", being built in the Indianwood Shores Land Company real estate development.



Prize design by Kurt Steinback, Detroit, "The Dearborn", being offered by Shannon-Mackinnon Company in South Dearborn.



Prize design by David D. Demmy, Harrisburg, Pennsylvania, "The Birmingham", being built by John Ward Howland, Inc., in Pembroke Manor, Birmingham, Detroit.



Honorary mention design by J. W. Leinweber, Detroit, "The Huntington", McGivern-Haldeman, builders in Huntington Woods.

4 Detroit Master

For Construction of THE DETROIT FREE PRESS PRIZE WINNING HOMES as Rust-Proofed Electric Houses



AS Managing Director of The Detroit Free Press, W. B. Lowe says:

"To encourage good home building in any community is to add immeasurably to the wealth, the buying potentialities and the general well being of the citizens. The Detroit Free Press takes some pardonable measure of pride in fostering such a movement in Detroit through its Architectural Competition and in its association with the Home Owners Institute in the erection of



good homes in the Detroit area."

The four Detroit Free Press prize-winning architectural designs as shown on this page are now being constructed by Detroit builders as Master Model Homes. Home Owners Institute specifications as used call for only those products with nationally known trademarks and established reputation, including:

★ ★ ★

Anaconda Brass Pipe, Gutters Rain-Pipes, and Flashings of Anaconda Copper, Screens of Anaconda Bronze Wire
THE AMERICAN BRASS COMPANY

New Ideal Redflash Boilers, New Ideal Hotcoil Water Heaters, American Corto Radiators
AMERICAN RADIATOR COMPANY

Common Brick
COMMON BRICK MANUFACTURERS ASSOCIATION OF AMERICA

G-E Wiring System, G-E Refrigerator, G-E Vacuum Cleaner, G-E Fans
GENERAL ELECTRIC COMPANY

Rigid Asbestos Shingles; Improved Asbestocel Pipe Insulation
JOHNS-MANVILLE CORPORATION

Kernerator Chimney-Fed Incinerator
KERNER INCINERATOR COMPANY

★ ★ ★

Tiger Finish (Hydrated Lime) Walls; Lime for Plastering and Brick Mortar
THE KELLEY ISLAND LIME & TRANSPORT COMPANY

Forged Iron Hardware, Hinges
MCKINNEY MANUFACTURING COMPANY

Metal Lath for Better Plastering
NATIONAL COUNCIL FOR BETTER PLASTERING

Miracle Doors
PAINE LUMBER COMPANY, LTD.

Cephas B. Rogers Decorative Lighting Fixtures
CEPHAS B. ROGERS, INC.

Plumbing Materials
STANDARD SANITARY MFG. CO.

Truscon Steel Casement and Basement Windows
TRUSCON STEEL COMPANY

HOME OWNERS

L. PORTER MOORE, President



Builders Adopt Model Homes!



Henry K. Holsman, F.A.I.A., prominent Chicago architect, Past President, Illinois Chapter, American Institute

of Architects, says: "When a home is built with the use of non-corrodible metals — copper, brass, and bronze — it has been rust-proofed. The architect knows that the unsightliness of rusted metal not only spoils the appearance of a building, but also decreases the chance of an advantageous sale and lowers the loan value. The good architects, like those cooperating with Home Owners Institute, specify rust-proofing materials and equipment. They cost surprisingly little and better built homes always result. For seven years I have watched the work and the growth of Home Owners Institute. Its demonstration model homes have been an important factor in the development of the national campaign for better homes."

★ ★ ★

Every Master Model Home is a rust-proofed home electric. Insisting, as do Home Owners Institute's supervising architects, that all Realtor-Builders constructing Master Model

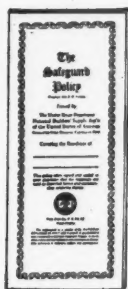
Homes use copper, brass and bronze throughout, the expense of replacement in a few years of gutters, rain-pipes, screens, water pipes, hardware and the like is saved for all time. No water leaks to rot wood or repainting to cover rust streaks. It costs the builders a bit more for construction, but in consequence they are building and selling better homes.

Accompanying illustrations show how some of these rust-proofing economies are effected in Master Model Homes.

(1) Anaconda brass pipe which cannot rust is used for all hot and cold water lines, together with brass plumbing fittings plated with Chromard as specified with Standard plumbing fixtures — from one of our New York Herald-Tribune model homes.

(2) All wires for the General Electric wiring system in Master Model Homes are of copper — from our Detroit Free Press model home, showing electrical conveniences in its breakfast nook.

(3) Doors throughout Master Model Homes are equipped with McKinney brass butts and hinges which are permanently rust-proof — shown in Buffalo Courier-Express model home.



The Home Owner's Safeguard Policy protects builder and purchaser. This Policy covers every Master Model Home and certifies as to quality of all materials and equipment as specified and used in construction.



(1)



(2)



(3)



HOME OWNERS INSTITUTE, INC.
441 Lexington Ave., New York City

- ☐ I enclose 25c (stamps accepted) for "A Manual of Home Building", containing 40 pages of text, pictures and floor plans of model homes.
- ☐ I enclose \$1.00 (cash, check or money order) for the "Home Owner's Safeguard Policy".
- ☐ I enclose \$3.00 (cash, check or money order) for the 324-page, Vol. I, "The Book of a Thousand Homes", containing 500 attractive homes of all types.

Write name and address large in margin below.

(1)

INSTITUTE, Inc.

441 Lexington Avenue, New York City



THE MCKILLIP APARTMENTS, HIGHLAND PARK, ILL. ARCHITECT, PAUL F. OLSEN. CONTRACTORS, THORGERSON & ERICKSON

THE combination apartment and business property illustrated here shows how Lupton Steel Casements serve the investment builder.

Lupton Steel Casements improve the architectural style of the entire structure, thereby adding to its resale value. In addition, they make the apartments above the stores more attractive to ten-

ants because these steel casement windows are easy to operate at all times, afford excellent lighting and ventilation, and strike a distinctly decorative note in every room.

Learn at what low cost you can improve your properties with modern Lupton Windows. Write for Catalogue C-217 which gives full details.

DAVID LUPTON'S SONS CO.

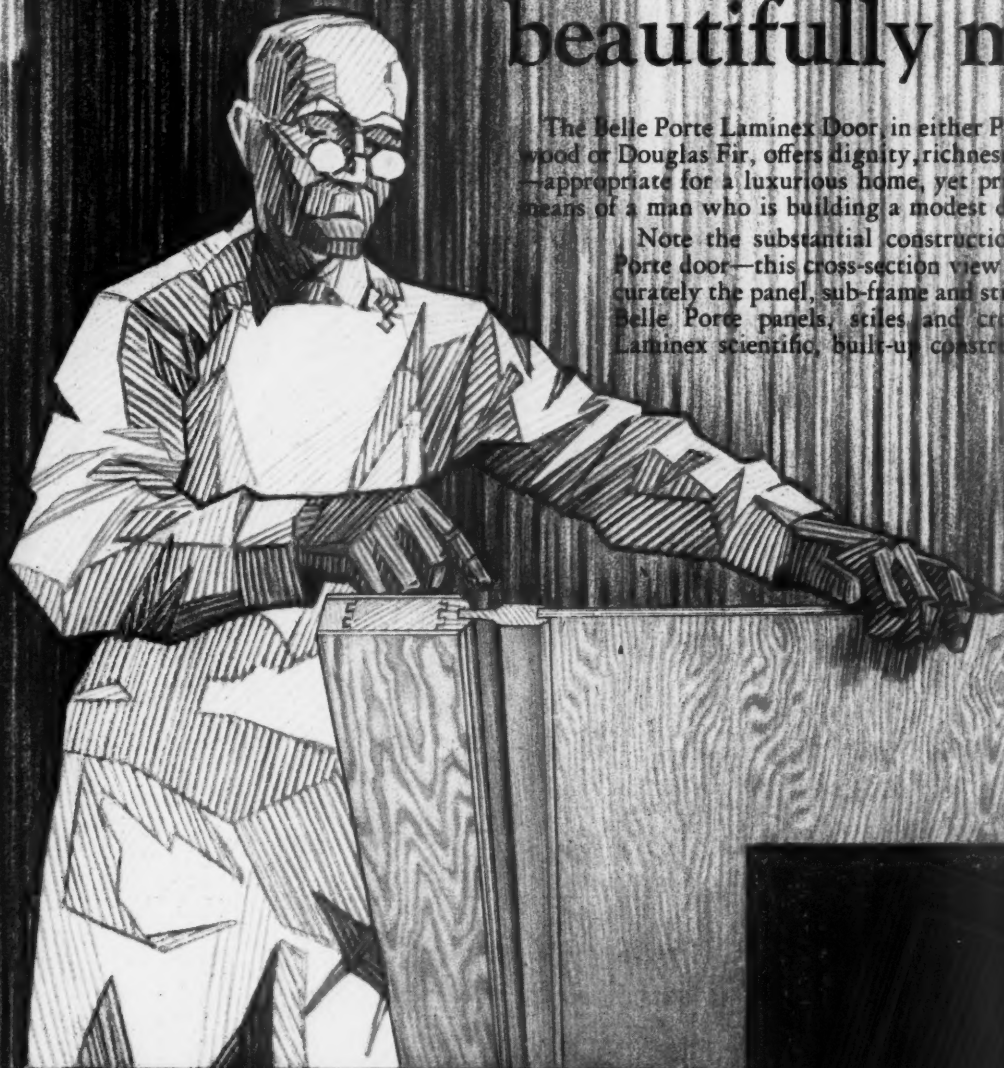


2203 E. Allegheny Ave., Philadelphia

Lupton STEEL Windows

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

Belle Porte—A beautiful door, beautifully made



The Belle Porte Laminex Door, in either Philippine Hardwood or Douglas Fir, offers dignity, richness and simplicity—appropriate for a luxurious home, yet priced within the means of a man who is building a modest dwelling.

Note the substantial construction of the Belle Porte door—this cross-section view shows how accurately the panel, sub-frame and stiles fit together. Belle Porte panels, stiles and cross-rails are of Laminex scientific, built-up construction.

BELLE Porte, or any other Laminex door in either Philippine Hardwood or Douglas Fir, will retain its beauty and justify its careful workmanship, because of its immunity to damage by moisture.

Laminex stiles and cross-rails are built up on laminated core blocks, welded to rigid edge braces. Flawless layers of wood are cemented securely to these core blocks with our secret waterproof cement. Laminex panels are built of three-ply, permanently united by the same powerful adhesive. This Laminex waterproof cement—one of our most valuable trade secrets—is responsible for the fact that a Laminex door can be soaked in water for days at a time without buckling, splitting or coming apart.

You can buy popular styles of Laminex doors at reasonable prices from the ample stocks of progressive lumber and millwork dealers. If you are unable to get Laminex doors from your local dealer, write us and we will give you the name of a dealer who will supply you. Look for the yellow replacement guarantee label and the word "LAMINEX" on the bottom of these doors. Mail the coupon for our new book that explains the scientific construction of Laminex doors, and for the booklet about Laminex Philippine Hardwood doors.

LAMINEX DOORS
WILL NOT SHRINK, SWELL OR WARP

THE WHEELER, OSGOOD COMPANY
Tacoma, Washington
Gentlemen:

Please send me your new Laminex door book and your booklet about Laminex Philippine Hardwood doors.

Name.....

Address.....

City..... State.....

I buy..... doors per year.

NOW! — Laminex Philippine Hardwood doors

(often called Philippine Mahogany)

Think of the added possibilities a Laminex Philippine Hardwood door offers to you. Beauty and richness, rivaling that of the finest mahogany, at a price that the average man can afford to pay. And, in addition, Laminex construction, that you know is trouble-proof—guaranteed—an advantage that no other custom-built door of any kind can offer.

In fact, Laminex door passing test, that retail dealers make publicly in all parts of the country, proves that dampness will never make a Laminex door warp, split or come apart.



LAMINEX Philippine Hardwood doors are now manufactured in all standard Laminex designs, in both the light red and dark red. The light red can be finished in brown or walnut, as well as in mahogany; the dark red, although it can also be finished in brown, is particularly adapted to be finished in a rich mahogany color.

You can obtain Laminex Philippine Hardwood doors with the quarter sawed panels, stiles and rails that show the beautiful narrow ribbon grain, so characteristic of mahogany. Or you can ob-

tain them with the plain grain. Either figure of grain possesses that beauty which is so desired in fine homes, office buildings and apartments.

Laminex construction principles make doors trouble-proof; Laminex Philippine Hardwood doors are among the most beautiful doors on the market. Surely, such a moderate-priced combination of integrity and beauty in doors will make Laminex Philippine Hardwood doors extremely popular. It pays to install beautiful trouble-proof Laminex doors. Mail the coupon on the other side for full information.

LAMINEX REG. U. S. PAT. OFF. **DOORS**
WILL NOT SHRINK, SWELL OR WARP

Another Big Trane Achievement—

UNDER-WINDOW CONCEALED HEATER



The famous Trane copper-fin heating element is now part of a standard three-piece unit, ready to install under windows.



The new under-window unit fits into this standard wall space. No work required of other trades — carpenters, lathers, plasterers, sheet metal men, etc.



Heating element installed on lugs in wall box. Always level. No legs to adjust. Underslung fittings make piping connections easy and save space.

Another Big Step Forward in Room Heating

Here's what you asked for! A Trane Concealed Heater especially designed for installation under windows. A complete outfit to slip in the wall without fuss, bother, or extras to buy. A concealed heater with the entire front panel removable, so you will have no plastering problems and so you can easily and quickly inspect the heater, trap, or valves if you wish. An outfit with underslung piping connections, which will save you at least a foot in length for a given heater. A heater with universal fittings that are suitable for use on all types of heating systems.

This new Trane Under Window Concealed Heater is what you want. Convected heat. Instantaneous control. A lower installed cost than we could ever promise before. Simple, quick, handy, convenient, the last word in modern concealed heating.

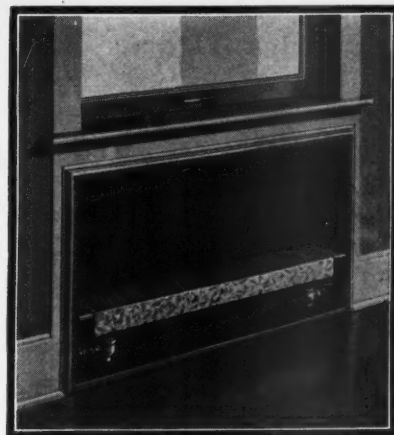
Thousands of installations of the original Concealed Heaters in the past two years furnish the background for this perfected unit.

THE TRANE CO., 276 Cameron Ave., La Crosse, Wis.
(Established 1885)

HEAT **TRANE** CONCEALED
CABINETS HEATERS

... PUMPS AND HEATING SPECIALTIES ...

This is the first of three important announcements to be made by Trane during 1928. The next will appear in an early issue of this publication.



The front of the unit, including grilles, is a one-piece panel, furnished complete. Slips on and off in a moment—provides immediate access to the unit at any time.



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

THAT'S THE WAY TO SAW!

BECAUSE it's easy. It saves muscle. Electricity does all the work.

BECAUSE it's fast. It saves time. SKILSAW rips or cross-cuts ten times faster than a hand saw.

BECAUSE it's economical. It saves money. In saving labor and time it pays for itself on one job. And, it cuts with absolute accuracy the first time.

This 10 lb., 1/2 H. P. Skil-saw, the original electric hand saw, zips thru 2-inch dressed lumber in a matter of seconds.

The price is \$60⁰⁰

We want you to try Skilsaw on your own work, **WITHOUT COST**. Send coupon.

Skilsaw is made in four sizes. There is one to do all your sawing. It will do it anywhere, because you can carry it about as easy as any tool you've got.

SKILSAW, Inc.
3822 Ravenswood Ave.
CHICAGO

Without obligation I will gladly watch a five minute demonstration.

Name.....

Address.....

City.....

State.....





The easiest, quickest way to hang windows

ACCO No. 8 Sash Chain comes packed in bags—100 feet to a bag, enough for seven average windows, with necessary attachments to fasten to weights and window frames. No knot tying—no waste.

ACCO No. 8 Sash Chain operates perfectly with any cord pulley

It is made of copper-bearing steel, which is a rust resistant—and to further protect against corrosion, it is coppered or galvanized.

Fill out the coupon below and we will send you a sample length of ACCO No. 8 Sash Chain for testing. If your lumber yard or hardware specialty dealer cannot supply you with ACCO Sash Chain, give us his name and we will see that you have a convenient source of supply.

USE

ACCO No. 8 Sash Chain

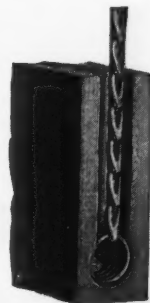
AMERICAN CHAIN COMPANY, Inc., Dept. A-7, Bridgeport, Connecticut

Gentlemen: Please send me a sample length of ACCO No. 8 Sash Chain for testing.

Name.....Address.....

I would buy ACCO Sash Chain through.....(Name of dealer)

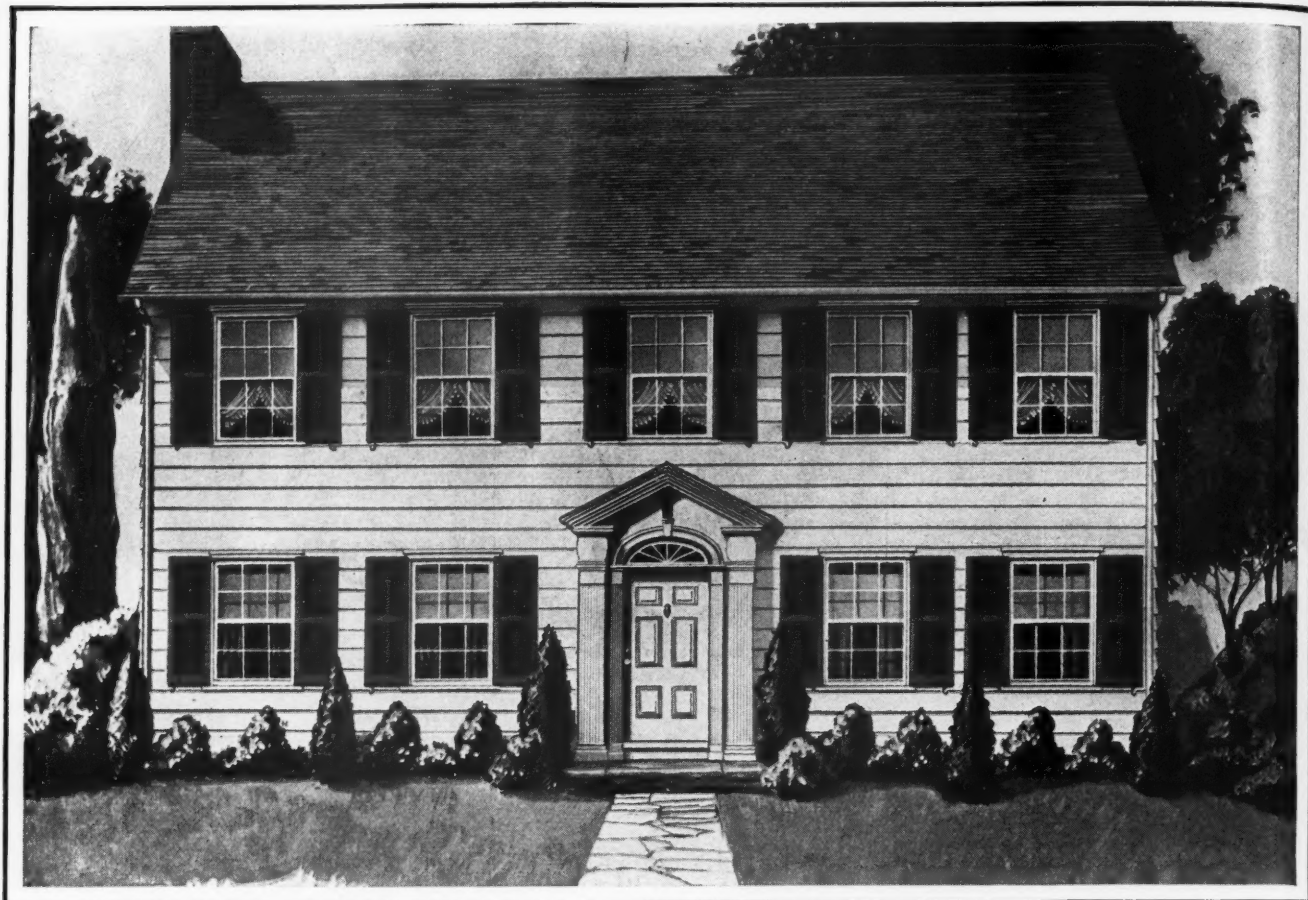
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



For one-hole sash, a coil spring provides a strong grip that cannot tear loose. Simply slip coil into end link, give it a turn and insert in sash with thumb.



For two-hole sash, the coil spring is inserted in the upper hole, slipping the coil into end link and inserting in same manner as with single-hole sash.



Residence of Archie B. Carson, Winnetka, Illinois. Designed by Fred R. Haviland; builder, Joseph Wolf. Insulated with Masonite, the thermostatic wood for structural insulation.

\$4,000 profit offered before moving into this new Masonite home!

THIS happened just a few weeks ago in Winnetka, Illinois, one of Chicago's most beautiful North Shore suburbs.

Fred R. Haviland, designer of the home, wanted to make it an outstanding example of year 'round comfort. And that is why, after testing all leading insulating materials, he specified Masonite, the thermostatic wood.

As a direct result, the owner received an offer of \$4,000 more for

his home than it cost him—and before he had even moved in. While the offer was refused, it goes to prove, once again, that insulating a home with Masonite materially increases the resale value.

Write today for the full story of Masonite and how it helps builders and contractors make more money.

MASONITE CORPORATION

Dept. 178, 111 W. Washington St., Chicago, Ill.

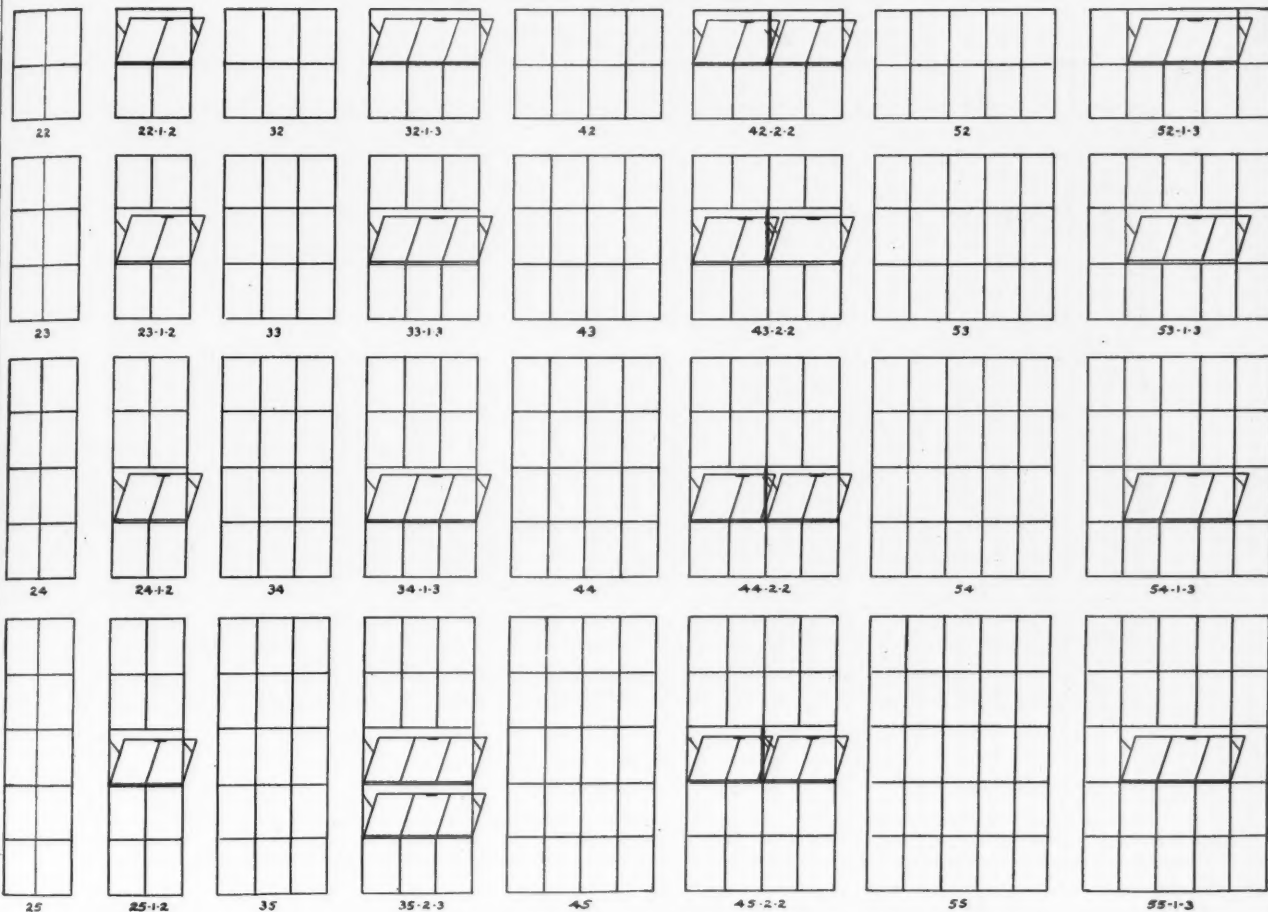
Mills: Laurel, Mississippi

Masonite
THERMOSTATIC WOOD FOR
STRUCTURAL INSULATION
Made by the makers of MASONITE PRESWOOD
REG. U.S. PAT. OFF.

© M. F. Co.

VENTO PUTTYLESS STEEL FACTORY TYPE WINDOWS

U. S. PAT. 3-4-24—OTHER PATS. PEND.



Sold Only Thru Dealers —

on a Profitable Proposition. NO JOB, Contractor or Builder, Sold Direct

The illustrations above show how completely the Vento line covers the market for steel side wall windows. There is a Vento Puttyless Steel Window for every garage, factory, warehouse, oil station or other industrial building. And each incorporates the Vento features of superiority—features which enlarge the market and increase the dealer's profits.

For example—the Vento feature of opening in at top means that the window will shed rain even when open, gives free, indirect ventilation—no drafts, and allows the window to be fitted with outside Vento Screen—a real need on all manufacturing plants where insects and flies are a menace—Creameries, Bakeries, Candy Factories, etc. And there is a screen profit—a revelation in steel sash construction.

Sample Model with Screen Gladly Furnished to Our Dealers for Salesmen—Also Advertising Literature.

VENTO STEEL SASH COMPANY
MUSKEGON, MICHIGAN

And the Vento Patented Puttyless Clips hold standard size glass against a weatherproof cushion of cork. No putty to bother with at any time—anyone can set a new pane of glass in a few moments' time and insure a neat, permanent job. Vento Windows are also stronger—every muntin and frame joint is electrically welded. Plumb and true—screen frames are steel electrically welded into solid frame.

You're sure to get more profitable sales with the Vento line. Many dealers who were "sour" on steel windows are now regular Vento Sash carload buyers. Write for our proposition and ask for descriptive literature.

VENTO STEEL SASH CO., Muskegon, Mich.

Please send me full information about "Vento" Factory Type Steel Puttyless Windows.

Name.....

City.....

State.....

Dealer ☐ Builder ☐ Contractor ☐

Lift your houses out of cheap competition



No repair bills for decayed woodwork will confront Mr. Carroll Milam of Jacksonville, Florida, who used Tidewater Red Cypress in this charming house. Jefferson D. Powell was the architect and Neal D. Evans, the builder.



Use cypress for the exterior—and then use it as a powerful sales argument

WHEN you build with Tidewater Red Cypress, you have a real sales argument to offer prospective home-buyers. You can tell them that the wood you have used should still be young in 2028. You can tell them that they should never have to spend a dollar on repair bills.

Home-buyers are being convinced more and more each year that Tidewater Red Cypress is in the long run the most economical lumber they can use. They are learning its economy from their own experience and from the magazine advertising of the Southern Cypress Manufacturers' Association.

Home-buyers are learning that Tidewater Red Cypress is the wood for weather. They are learning to de-

mand this Wood Eternal for siding, shingles, cornices, porches, windows, doors, screens, steps, and at all other vital points where wind and rain might do their damage. They are being told, also, that great durability is found only in the coastal type of cypress—in "heart grade Tidewater Red Cypress". They are being told to accept no substitute.

Drop a note in today's mail, asking for "Money Saved for Builders", the booklet which tells how Tidewater Red Cypress is grown and milled . . . how it has endured for centuries in buildings that still stand . . . how it is used in charming modern homes . . . how it makes a house more saleable and boosts its resale value. It's yours for a postcard. Southern Cypress Manufacturers' Association, Dept. AB-7, Jacksonville, Florida.

Specify

TIDEWATER RED CYPRESS



THE WOOD ETERNAL

An Additional Asset in Any Building

*—these better washable window shades
need not be replaced for years*



*Ripley & Leboutillier Apartment Buildings "A" and "B", Mariemont,
near Cincinnati, Ohio—Tontine-equipped.*

A TONTINE-equipped building enjoys a definite advantage. Here is an added feature any buyer or renter appreciates at once.

Consider Tontine shades especially on the basis of maintenance costs. They solve a definite management problem.

Du Pont Tontine, the washable window shade, can be kept clean as the windows; and through years of service without replacement it more than saves its original cost.

Tontine is made by a special du Pont process. It contains no "filler" and cannot crack or

pinhole. It is impregnated with pyrox-
ylin, the basic substance of that other
famous du Pont product—Duco—
which has brought enduring beauty
to the American highway and the
American home.

Always clean and attractive, new and
spotless, du Pont Tontine shades will
dress up for many years the windows of
the buildings you construct. In-
vestigate the Tontine story now.



E. I. DU PONT DE NEMOURS & CO., Inc.
NEWBURGH, N. Y.

Canadian Distributors:
CANADIAN FABRIKOID Limited
New Toronto, Ontario, Canada



TONTINE

REG. U. S. PAT. OFF.

THE WASHABLE WINDOW SHADE

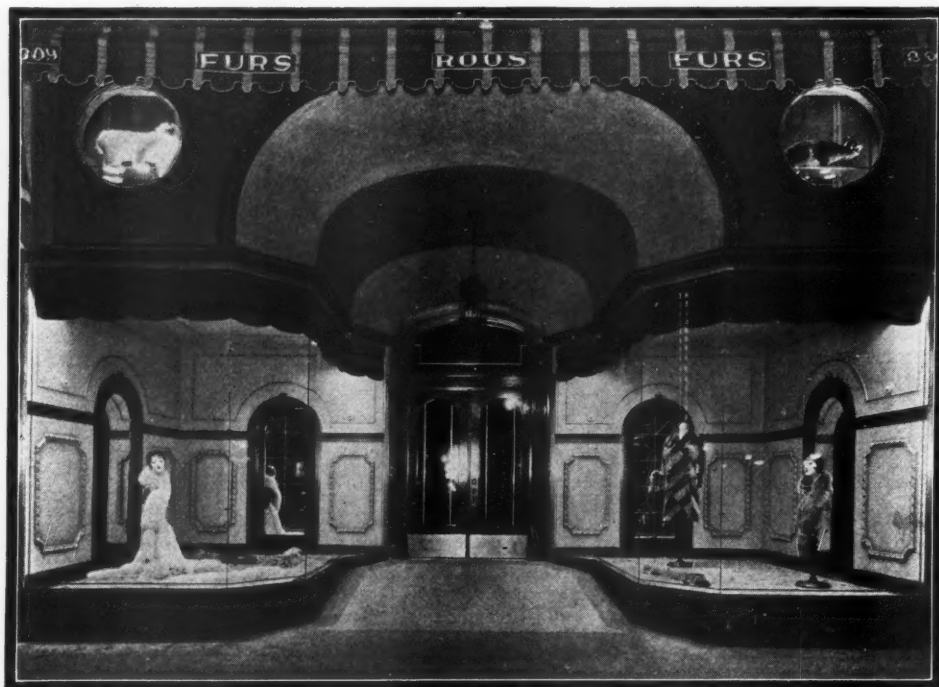
E. I. DU PONT DE NEMOURS & CO., Inc.
Desk AB-16, Newburgh, N. Y.

Please send me sample and full information about Tontine, the washable window shade.

Name.....
Address.....
City..... State.....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Store Front Effectiveness with EXTRUDED BRONZE



Store of LEPPERT-ROOS FUR CO., ST. LOUIS, MO.—NAT ABRAHAMS, INC., Architects

Our new Extruded Bronze sash section (mouldings that retain plate glass) is constructed so that no screws are visible. It is possible to construct an entire front without unsightly screw heads appearing. This is very desirable.

Extruded Bronze offers the most outstanding treatments of exterior decoration. It is priced on a basis that allows for free use.

We welcome the opportunity of submitting drawings and details.

Modern Bronze Store Front Company

And Associated Companies:

*International
Distribution*

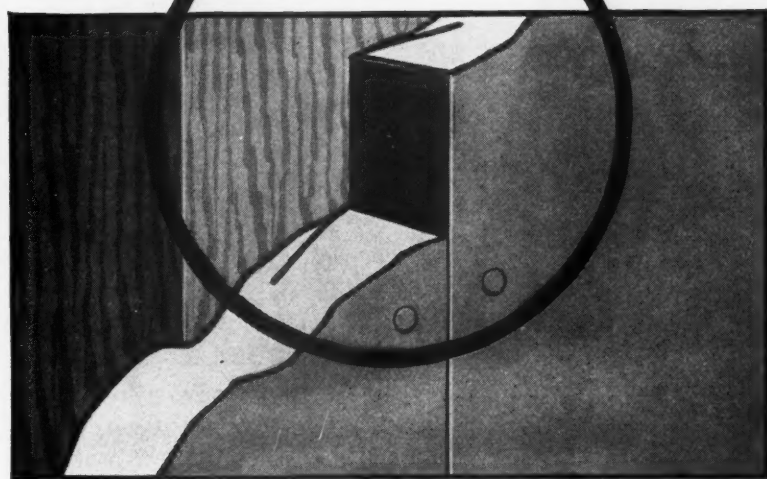
Zouri Drawn Metals Company
International Store Front Company
Standard Store Front Construction Co.
Zouri Company of California
Zouri Drawn Metals Co. of New York, Inc.

*Names on
Request*

Factory and General Offices: Chicago Heights, Illinois



THESE PROTECTED EDGES



will protect your wallboard job

AS viewed by the builder, a gypsum wallboard with sturdy protected edges falls into a class by itself.

Here is such a wallboard with tough fibre surfaces folded squarely around the edges, providing a remarkable reinforcement—a patented feature of Sheetrock.

These *protected edges* provide extra nailing strength. They promote neater and cleaner jobs.

The *protected edges* are square and of uniform thickness. The sheets fit together snugly and evenly. This makes a smooth, tight joint which is further concealed and protected by the USG patented joint system.

Sheetrock gives a wall that is monolithic in character, a satisfactory base for any decoration.

Other advantages of this improved wallboard are due to its gypsum content—it is fireproof, rigid, non-warping and economical to use.

The contractor or builder who has once built with Sheetrock finds many uses for this standard material. For full information, just mail the coupon.

Sheetrock comes in standard sizes 3/8-inch thick, 32 or 48 inches wide, 6 to 10 feet long

UNITED STATES GYPSUM COMPANY
General Offices: Dept. 1, 300 West Adams Street, Chicago, Illinois

SHEETROCK

Reg. U. S. Pat. Off.

FIREPROOF... INSULATING

Made only by the United States Gypsum Company

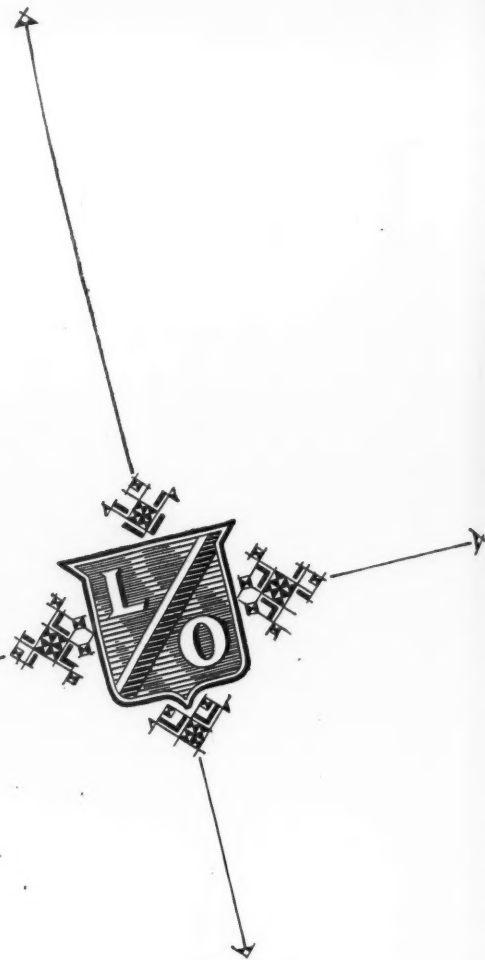
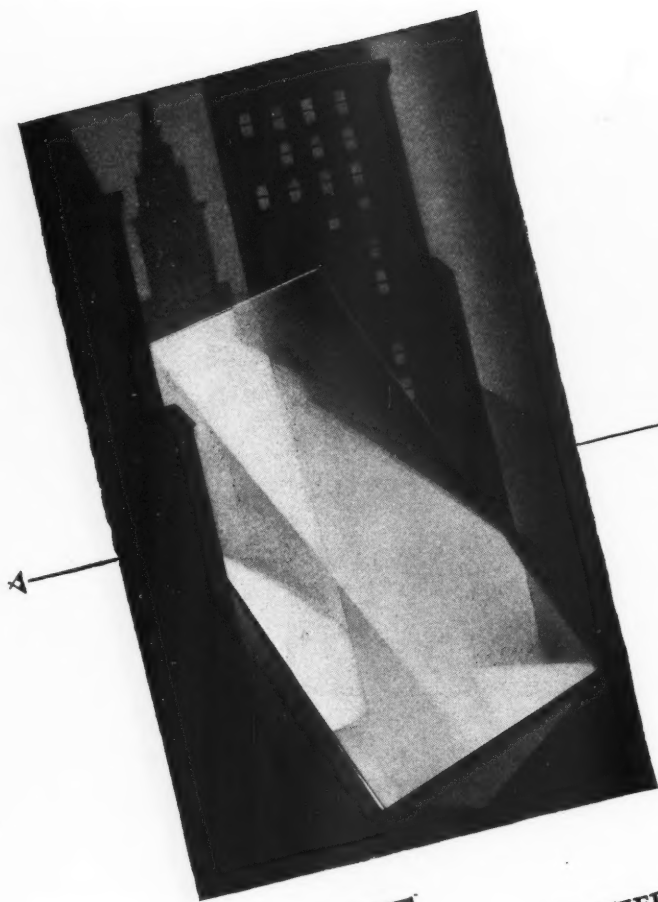
CLIP AND MAIL THIS COUPON TODAY!

Please send me your data on the Sheetrock Reinforced Joint System and other special information on Sheetrock.

UNITED STATES GYPSUM COMPANY, General Offices: Dept. 1, 300 W. Adams St., Chicago, Illinois

Name..... Address.....

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THE RECOGNIZED higher quality of LIBBEY-OWENS flat-drawn clear sheet glass is giving a decided impetus to the movement among architects and home-builders to make windows everywhere more beautiful.

The superiorities which have won leadership for LIBBEY-OWENS glass are produced by an exclusive LIBBEY-OWENS process of manufacture which makes glass truly flat and uniform in thickness and strength, and gives it a brilliant lustre.

Wherever beauty, attractiveness and clear vision are desired we recommend LIBBEY-OWENS "A" quality glass — labeled and paper-packed.

THE LIBBEY-OWENS SHEET GLASS COMPANY

TOLEDO, OHIO

**FLAT-DRAWN
CLEAR SHEET GLASS**

Libbey-Owens

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE



“... and it has
RUNNING WATER”

RUNNING WATER! What a selling point for the contractor or builder. The prospective buyer thinks of a home in terms of comfort. Naturally a building with running water is preferred.

And it costs so little to include a water system in the building. A small expenditure for a Fairbanks-Morse Home Water System increases the value of the property and adds infinitely to salability.

Think of the F-M Water System as a means to beat competition. Prepare yourself for the building season by using the coupon to get full information.

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Only \$20 down with easy monthly payments if you desire. Any Fairbanks-Morse dealer will be glad to explain these convenient terms. Just use the coupon to secure full description and complete information.

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PUMPING
PROBLEM?**
Our engineers
will advise you
free of charge.



only \$70

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factory, for
210 gallon
per hour system complete
with motor
for 60 cycles
or direct current.

Here are
unmatched
F-M features

- 1 Completely enclosed. All parts fully protected.
- 2 Compact—19" in diameter, 21" high.
- 3 Big capacity—210 gallons per hour.
- 4 Entirely automatic—starts itself—stops itself.
- 5 Easy to install—only two pipe connections.
- 6 Completely equipped, including electric motor, automatic switch, pump and tank.
- 7 Quickly accessible—simply lift hood. The removal of one stud bolt exposes valves.
- 8 Quiet and exceptionally smooth running.
- 9 Self-oiling.
- 10 Supplies steady, full stream without pulsation.
- 11 Fresh water connection with every pump at no extra charge.
- 12 Can be used with large storage tank when desired.
- 13 Genuine F-M unit throughout. Fully guaranteed—the biggest home water system value ever offered.

Also a 420 gallon per hour system with features listed above at \$100. Both sizes for use where source of water is not more than 22 feet below the unit.

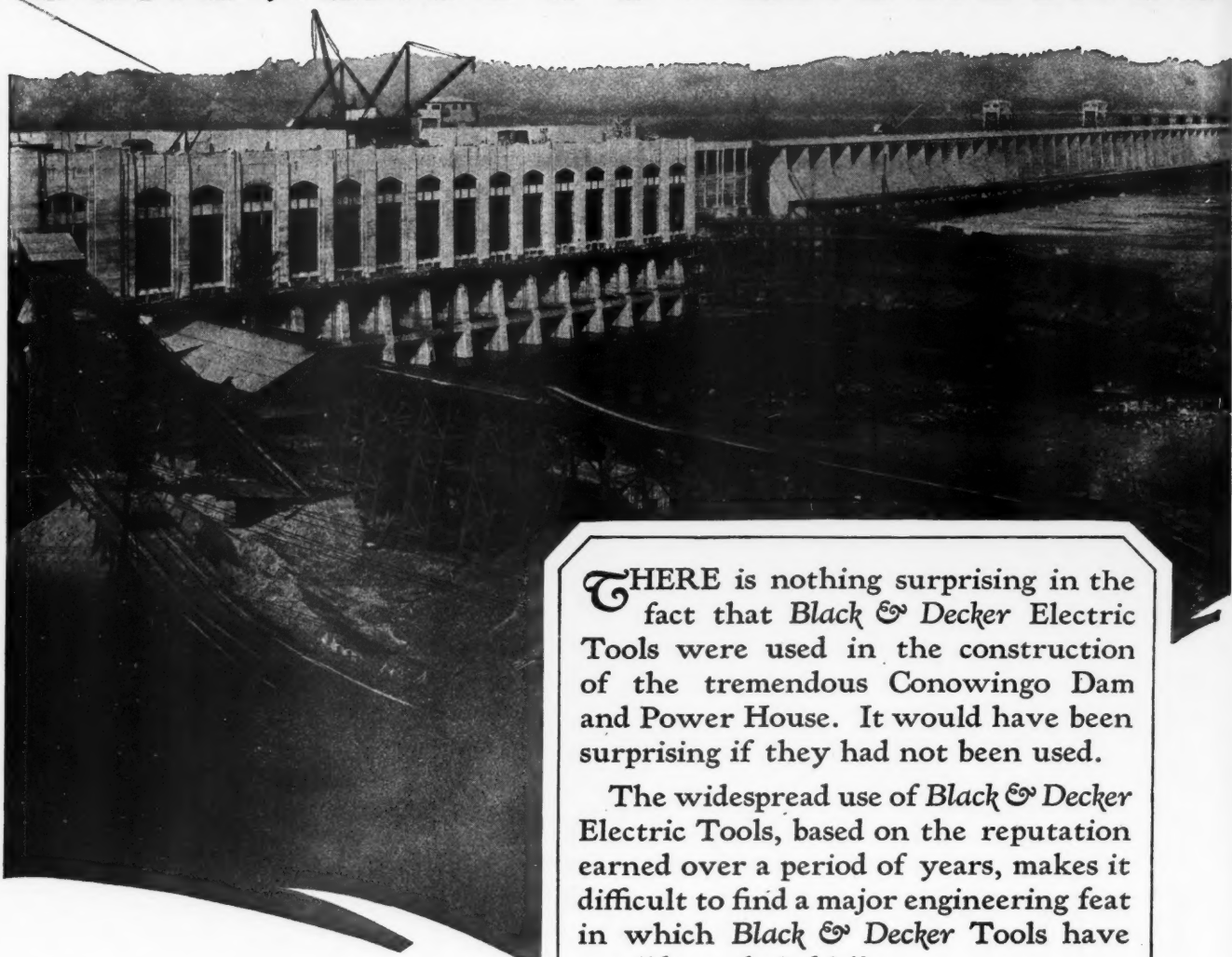
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BLACK & DECKER

ELECTRIC TOOLS

used on

CONOWINGO POWER PROJECT



Construction
Production
Maintainence

THERE is nothing surprising in the fact that *Black & Decker* Electric Tools were used in the construction of the tremendous Conowingo Dam and Power House. It would have been surprising if they had not been used.

The widespread use of *Black & Decker* Electric Tools, based on the reputation earned over a period of years, makes it difficult to find a major engineering feat in which *Black & Decker* Tools have not "done their bit"

On the Conowingo Dam, Holland Tunnel and thousands of less spectacular construction jobs *Black & Decker* Electric Tools have played an important part.

The BLACK & DECKER MFG. CO.

TOWSON, MD., U. S. A.

Black & Decker Mfg. Co., Limited, Toronto, Ontario

Black & Decker, Limited, Slough, Bucks, England

This Loader Skip

EMPTIES!

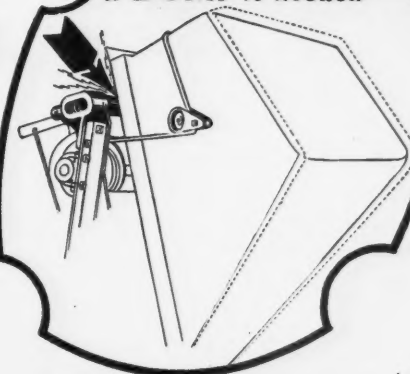
Every Bit of Material in Each
Batch Flows into the Drum
of the
**WONDER
MIXER**

There is a
Wonder Tilt-
ing Mixer made
in a size suit-
able for your
any purpose—
3½, 5, 7, 10,
14-S, all with
power loaders
and the sure-
emptying skip.



*This is one
thing you can
depend on in
a Wonder—
because it is
scientifically
designed.*

**"BUMPS where
a BUMP is needed"**



THE shape of the loader skip on the Wonder Mixer positively insures that every particle of material for each batch goes into the drum of the mixer. No need to bang the skip with a shovel to jar out dry materials.

The Wonder loader skip is scientifically designed to discharge its contents at an angle of 55 degrees from the horizontal—not theoretically but actually 55 degrees. At this angle gravity is bound to work. The bottom of the skip is made of one continuous piece of sheet metal from back to nose. There are no seams or sharp corners to catch and hold any of the material.

In addition to this extreme angle and special construction of the skip, the Wonder Mixer has the additional feature of the Wonder Skip Bumper ready for use in the event that sometimes damp material tends to stick inside the skip. This feature is illustrated above and can be used to "bump when a bump is needed." It bumps the skip without jarring any other part of the mixer structure.

Simple to operate and most effective, the Wonder Loader Skip with its shape and the Wonder Skip Bumper give you a mixer with which you can do more jobs with more profit per job.

5-7-10-S WONDER Mixer With Power Loader

This illustration shows the Wonder Mixer with power loader made in the 5-7 and 10-S sizes, with—fast, thorough mixing action—simple pouring discharge—drum with guaranteed bearing—one man lever control—chain drive to overhead shaft—dependable LeRoi power plant—Wonder-quick water tank—Alemite lubrication.

Learn How This Skip Bumper Works

Construction Mch. Co., 103 Vinton St. Waterloo, Ia.	
I'm certainly interested in bigger profits this year. Please send me catalog and prices on machine checked below.	
Tilting Loader Models	Tilting Trailers
<input type="checkbox"/> 3½-S <input type="checkbox"/> 5-S <input type="checkbox"/> 7-S	<input type="checkbox"/> 3-S <input type="checkbox"/> 3½-S
<input type="checkbox"/> 10-S <input type="checkbox"/> 14-S	<input type="checkbox"/> 5-S With Auxiliary
<input type="checkbox"/> Non-Tilt Mixers	Hoist for plaster.
Name _____	
City _____ State _____	

WONDER

ORIGINAL TILTING MIXER
Construction Machinery Co.

Speaking of "Selling Talk" for Your Houses---

—can you think of anything more appealing or convincing than good insulation talk—the kind you can use when the houses you build to sell are insulated with INSULITE?

It is decidedly the trend of modern home building—good insulation. House buyers demand it. And the strength, comfort and year-round service which INSULITE affords, whether used as

Sheathing, Plaster Base, Wall Board, as attic lining, roof insulation, or in any other way, give ready assurance to the buyer that such a house will save money in fuel consumption and be a constant source of satisfaction in hottest weather or when the days are cold.

Write today for an interesting new booklet—"Increasing Home Enjoyment." It is valuable for home owners and builders alike.

INSULITE

the Wood-Fiber Insulating Board

INCREASING HOME ENJOYMENT

Showing how the special sized units of Insulite 18" x 48" are used as plaster base, providing these important results at one cost—plaster base, insulation against heat or cold, as well as insulation against sound.

One of the reasons why Insulite, the wood-fiber insulating board, has won favor among contractors and home builders is due to the ease and economy with which it can be handled and applied. Being light and because of the convenient sizes of the various units, Insulite is easy to handle and apply. A side wall can be covered with sheathing or plaster base in a fraction of the time it would take to cover the same surface with wood sheathing or wood lath.

Insulite Sheathing and Insulite Wall Board are made in big, broad boards, one-half inch thick, 4 feet wide and 8, 9, 10 and 12 feet long. Sheathing and wall board are packed in bundles of 6 pieces each, covered with heavy wrapping paper.

If Insulite is used building paper is not needed. Here we encounter a worthwhile saving, both in the cost of the building paper and the cost of application.

There is no waste when using Insulite. The large, broad boards are made in uniform sizes. There are no knot-holes or other defects.

Insulite Plaster Base effects a large saving of plaster in addition to providing a high-class plastering job. When plaster is applied on lath there is a loss of plaster, due to the plaster being forced through the space between laths. A large amount falls to the floor inside the wall. Such waste is eliminated by the use of Insulite Plaster Base.

Insulite Plaster Base is made in two thicknesses, one-half inch and one inch. Both units are 18 inches by 48 inches. Half inch Insulite Plaster Base is shipped on the long edges. The half-inch thickness comes in bundles of ten pieces, while the inch thickness comes five pieces to a bundle, both bundles being packed in heavy wrapping paper.

Spanish

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1202 Builders Exchange
Minneapolis, Minn.

Please send me your booklet "Increasing Home Enjoyment."

Name

Address

City.....State.....

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1202 Builders Exchange
Minneapolis Minnesota



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name for yourself
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HERE is one of the most lucrative fields of building contracting.

Window display is the most important part of a retail merchant's establishment. His profits and volume of business depend entirely upon his facilities for merchandise display.

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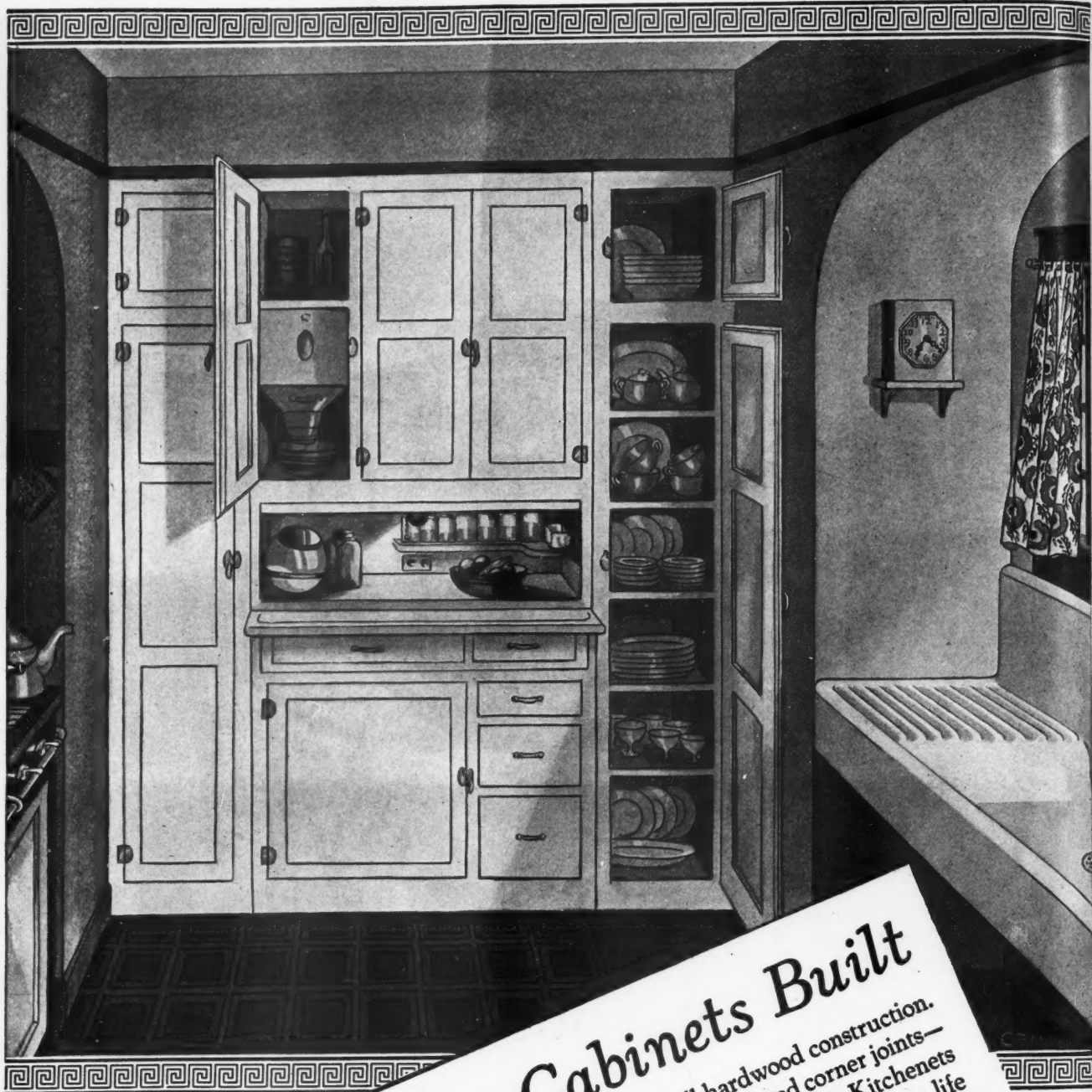
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FEW KITCHEN CABINETS have all hardwood construction, the hallmarks of master craftsmanship. Napanee Dutch Kitchenets have both — plus every other quality which makes certain long life and trouble-free service. Too, they afford all the little conveniences which appeal so much to women and thus increase the sales and rental value of the apartment or home. Write for the Napanee Catalog.

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Nappanee, Indiana
Gentlemen: Please send me further information regarding styles, sizes and arrangements of Napanee Kitchen Equipment. I am, ☐ Architect, ☐ Contractor, ☐ Owner. (Check square).

Name _____

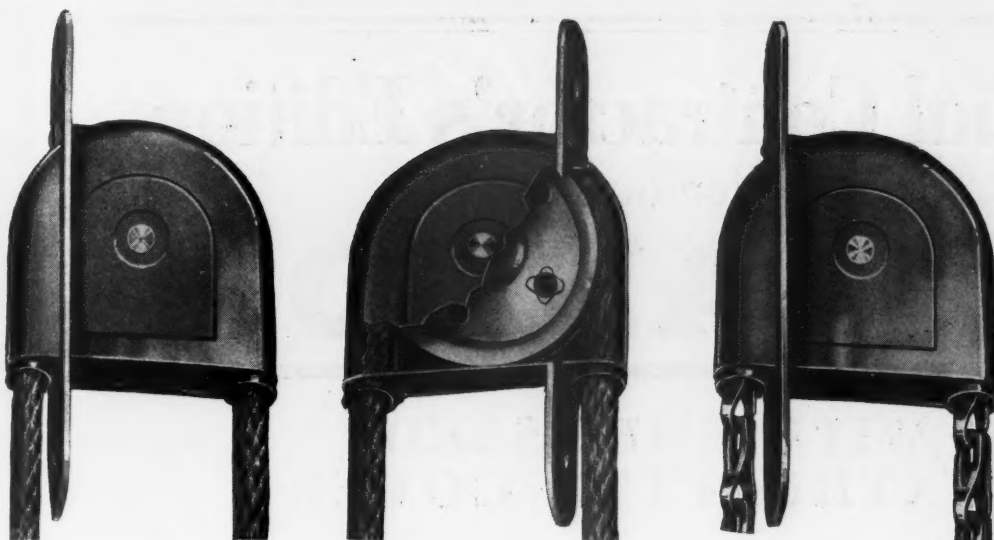
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DUTCH KITCHENET
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NEW

The first real improvement in sash pulleys in 30 years

The Dillon Sash Pulley (made by Stanley) is jam-proof, dust-proof, and weather-proof. It is totally enclosed in a cold-rolled steel casing. The cord runs true on the wheel and can be "threaded" over the pulley without the aid of a "mouse."

Here is a pulley that fills a real need in building construction. It is the only fully enclosed pulley which will complete weather stripping and make it absolutely draft-proof. It eliminates wornout sash cords. It will not break. It is attractive in appearance and makes a finished piece of hardware in itself, or if desired, it can be painted over with no possibility of gumming up the wheel.

We want to send one of these pulleys to every builder for examination and tests. Write us for a sample.

THE STANLEY WORKS. NEW BRITAIN, CONN.

STANLEY HARDWARE

MADE OF STANLEY STEEL



The Stanley Works, New Britain, Conn.

Please send me a free sample of the Dillon Sash Pulley. Send also a copy of your hardware catalog, No. 41M.

Name _____

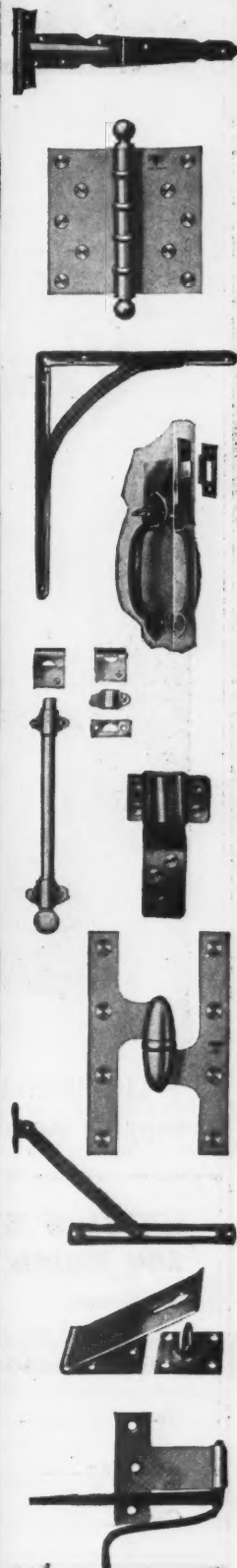
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My hardware dealer is _____



There are thousands of items in the extensive line of Stanley Hardware. You can find just the style and size you need in the Stanley Hardware catalog No. 41m.

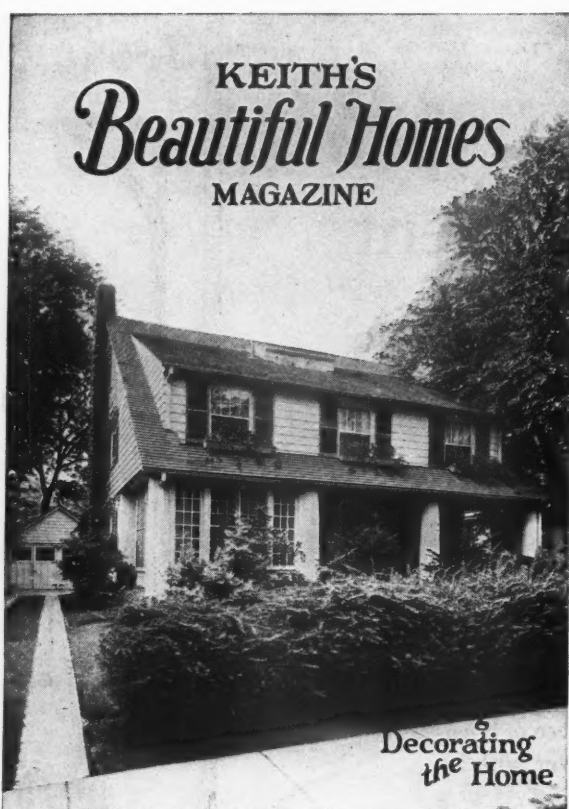


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WITH EMBOSSED LEATHERETTE COVER



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The 200 homes shown in this book with floor plans and complete descriptions, have actually been built and therefore tested for economy, convenience and good design.

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Beautiful Homes magazine is the same page size as American Builder. In the year it publishes over 100 plans of Beautiful Homes of moderate cost and just the type and style you will find most persons will want to build.

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Send me a copy of Keith's leatherette bound edition of **Beautiful Homes Plan Book and Keith's Beautiful Homes Magazine** for one year for which \$2.00 is enclosed.

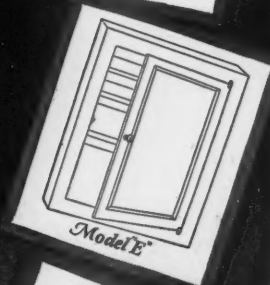
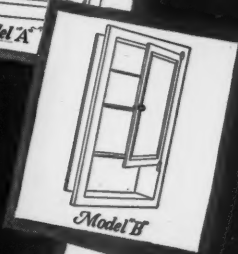
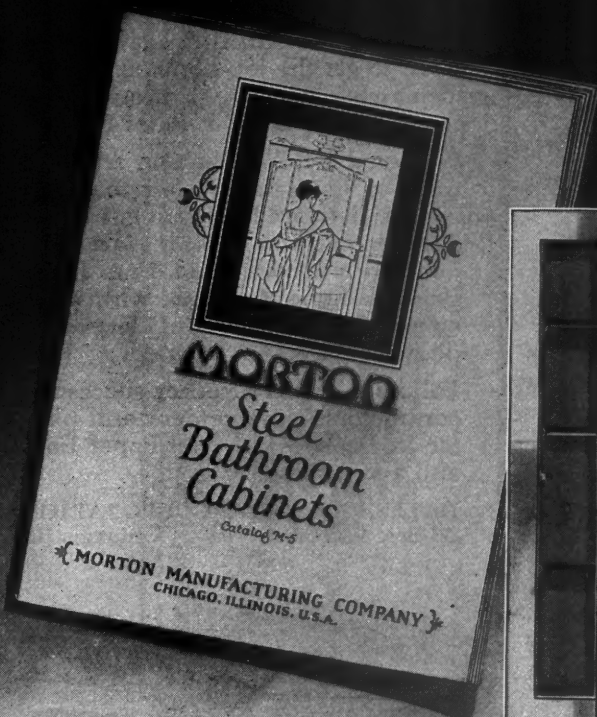
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A.B. 7-28

This New Catalog



Solves all bathroom cabinet problems

JUST off the press! Everyone interested in solving bathroom cabinet problems should immediately obtain a free copy of this helpful 24-page catalog. Beautifully printed in three colors, eleven models fully described and illustrated, including installation details. Actually a work of art yet practical from every standpoint. Easy to read and worth reading from cover to cover. Morton Steel Bathroom Cabinets are designed to conform with every bathroom cabinet requirement, practically and artistically. The line includes such exceptional models as the "Venetian," "Vanitie Venetian" and "Georgian," with etched, all-mirror doors which conceal the cabinet. Built to remain attractive and serviceable indefinitely without upkeep. Installed with minimum labor—"Out of the carton into the wall."

Morton Exclusive Features of Construction include rounded sanitary corners, special friction catch, sturdy hinges, crystal glass knob. Made of steel throughout, beautifully white enameled.

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MORTON MANUFACTURING CO., 5102 West Lake St., Chicago, Ill.

Without obligation, please send me a catalog of the MORTON Line of Steel Bathroom Cabinets.

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When you're running against the clock to get the job done on time—then's when you'll be glad you bought cement and plaster in Bates Bags.

Protected by the 5 strong separate walls of Bates Bags, your material can be delivered any time, in any weather, and you know it's safe from moisture and rough handling. Bates Bags are handy to work with; they open quickly, empty out clean, and do not have to be returned.

Follow the lead of other successful contractors—buy cement and plaster in Bates Multi-Wall Paper Bags and avoid loss.

BATES VALVE BAG CORPORATION
35 East Wacker Drive Chicago, Ill.

—no loss

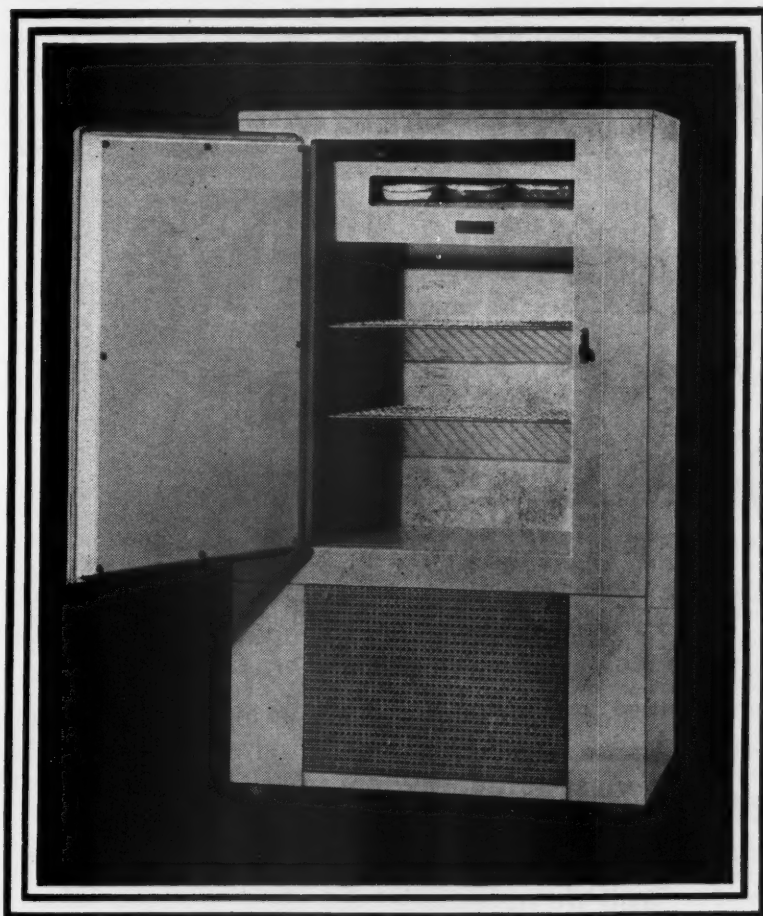


VAGTBORG
CONSTRUCTION CO.
BUILDERS

Fast work on a 7-story apartment in Chicago. Vagtborg Construction Company, Contractors. Work here progressed regardless of weather conditions

BATES *Multi-Wall* PAPER BAGS

Bates Multi-Wall Paper Bags are made by the Bates Valve Bag Corporation in 8 modern plants throughout the country
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THE idea of durability and trustworthiness is an all-important one in planning for electric refrigeration.

And where can you match Kelvinator's long record of economical service? The oldest domestic electric refrigerator in the world . . . the old Number One Kelvinator . . . is still running quietly and steadily along after twelve years of service!

You are carrying out your tradition of excellence in installing Kelvinator Electric Refrigerators . . . and you are insuring quick sale and quick rental as well. Write for our builders' book.

Kelvinator Corporation

DETROIT

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THE Philip Carey Company recognizes no "short cuts" to quality.

For The Philip Carey Company knows, as you know, that your customers are willing to pay for honest value. People today are seldom intrigued by promises of "something for nothing."

We never have manufactured "auction" products. And we never will. The best of materials, the best of equipment, the best of workmanship and the best of brains—your guarantee of Carey dependability.

True, we *could* cut prices, if you wanted us to, but only by cutting quality. The Carey Cork-Insulated Shingle, for example . . . We might cheapen the grade of the weather-insulating layer of cellular cork. We might use cheaper slate for the outer facing of weather-proofing slate. We might, perhaps, use only an ordinary grade of asphalt. Maybe we'd make a little more money that way . . . *for the present!*

But, of course, that is not the Carey way!

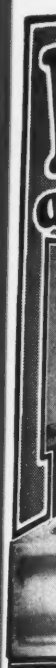
Home-owners and home-builders buy Carey Cork-Insulated Shingles as they do other Carey products, with confidence in you and confidence in us. Confidence which must not be abused—good-will, which honest quality alone can maintain.



Carey
CORK-INSULATED
SHINGLES

THE PHILIP CAREY COMPANY, Lockland, CINCINNATI, OHIO

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PR
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YO
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We ca
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TUBS
TANK
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AIR F
everyth



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120-3

PLUMBING and HEATING

INSTALL Your Own

SAVE 1/2
BY OUR NEW
EASY METHOD



OUR MILLION DOLLAR PLANTS BEHIND OUR GUARANTEE

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Send plan or pencil sketch of your building and our trained Engineers will design a Hot Water, Steam, Vapor, Warm Air or Plumbing Outfit to exactly meet your requirements. This service is FREE.

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We are familiar with all local ordinances everywhere and from your sketch or plan, with our Cut-to-Fit New Easy Method, we will build your system to conform with your local sanitary laws. Our products from the smallest fitting to a complete outfit have durability, beauty and ease of installation built in through and through.

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With our simplified and correct installing plans and instructions, any handy man can do the work himself with the aid of our free service and planning department. **TOOLS LOANED FREE.**

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YOU WILL SAVE NEEDLESS MATERIAL and HEAVY LABOR

We carry absolutely everything in Highest Grade New Easy Method Plumbing and Heating—BATHROOM OUTFITS, SINKS, LAUNDRY TUBS, WATER SOFTENERS, WATER HEATERS, SEPTIC TANKS, WATER SUPPLY SYSTEMS, PIPE, FITTINGS, VALVES, ETC. HOT WATER, STEAM, VAPOR, AND WARM AIR HEATING PLANTS with special builders wholesale prices on everything. **WRITE FOR BUILDERS FREE CATALOG TODAY!**



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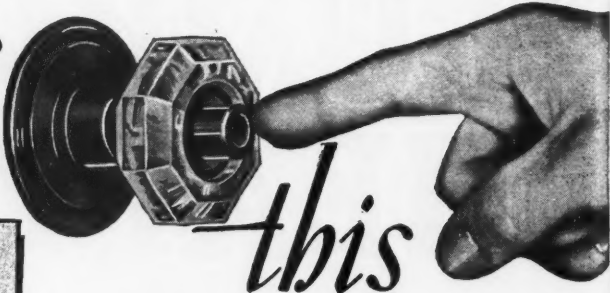
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Pressing



this

BUTTON impresses Home Buyers

REMEMBER what drawing cards steam heat, electric lights, and hot and cold running water used to be. Would you like something as convincing to point to now? Here is their modern equal—SCHLAGE button LOCKS. What more logical attraction, what less expensive feature, than the most used equipment in the whole house, the door locks—these NEW door locks, as amazing and interesting in their way as telephones and electric lights once were. Locked without keys, unlocked from inside by merely turning the inner knob. Instant protection by merely pressing a handy button, instant exit without a single extra motion. No visible screws. No unsightly key holes. No interior keys to hunt. *Instant action always.*

Watch the look of eager interest on your prospect's face as you go through this convincing demonstration. Watch the house wife beam with enthusiasm when you point out these many step-saving, time-conserving features. Successful builders say SCHLAGE button LOCKS are a big attraction. Put them on your next job and see how much quicker it sells—how much more you get for it. No home completely modern without them. Over a million already in use. Over 2000 dealers in U.S.

SCHLAGE LOCK CO.—Mfrs.

Factory and Headquarters
SAN FRANCISCO, CALIF.

Warehouse Branches
NEW YORK CITY—71 Murray St.
CHICAGO—230 W. Superior St.
and other cities.

**{The MODERN Lock}
for MODERN buildings}**

FRANK J. WACHEWICZ
REALTOR BUILDER
HAMMOND, INDIANA

November 17th, 1927.

Schlage Lock Company,
#230 W. Superior Street,
Chicago, Illinois.

Gentlemen:—

You will undoubtedly be interested in knowing our experience with the SCHLAGE LOCK since adopting it as the standard unit for our modern homes.

Our first installation was made in our MODEL HOME, the MANSIONETTE, which was opened to public inspection last spring and is still being maintained as a public exhibit.

The SCHLAGE LOCK proved to be one of the greatest of the many modern attractions with which this home is equipped and has met with such popular acclaim that we have adopted the SCHLAGE LOCK as a standard equipment in all of our construction.

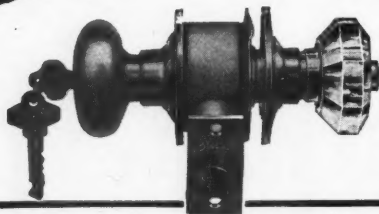
We believe that we have had ample opportunity to prove its practicability, which combined with the beauty of design, makes it one of the most eloquent sales arguments for our homes.

Yours very truly

Frank J. Wachewicz

FJW:A

SCHLAGE Button LOCKS



MAIL THIS COUPON NOW—

to SCHLAGE LOCK CO., SAN FRANCISCO, CALIF.,
for prices and complete information on
SCHLAGE Locks for

AB-7

Building _____

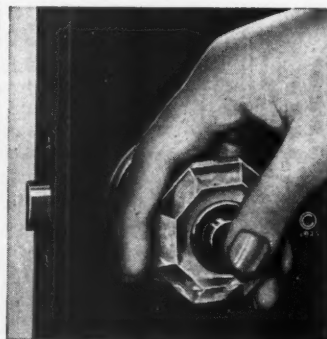
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**TO LOCK:
just press
the button
in the knob**

**TO
UN-LOCK:
just turn
the knob**

CLINCH THE SALE WITH MODERN FLOORS BY SLOANE



Every merchant builder knows that little refinements make selling easier. That's why so many of them now lay linoleum floors in their houses and apartments. A well-laid linoleum floor adds "eye-value" and, incidentally, saves you money in construction. If you can say "Made by Sloane," so much the better. That's just another way of saying quality linoleum with up-to-date patterns. If you wish any information or assistance on linoleum floors write our Contractors Service Department, 577 Fifth Avenue, New York City. W. & J. Sloane Mfg. Co., Trenton, N. J.

W. & J. SLOANE LINOLEUM

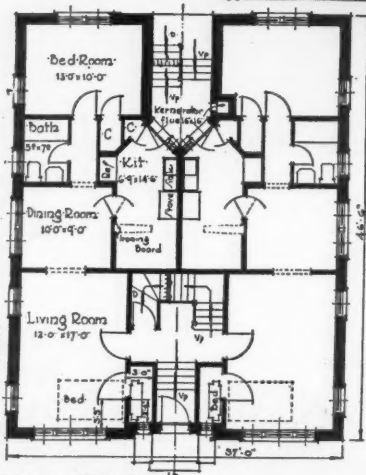
for Rambling Town or Crowded CITY



Different as these two buildings appear, they have practically the same basic plan—a plan that would still be good were the building to be carried up a dozen stories on high-priced, big-city land.

With a Murphy In-a-Dor Bed installed in the living room, each of these four-room apartments has a big, airy guest room, furnished with a luxuriously comfortable, full-sized bed. Neither does this guest room have to be cared for nor does rent have to be paid upon it.

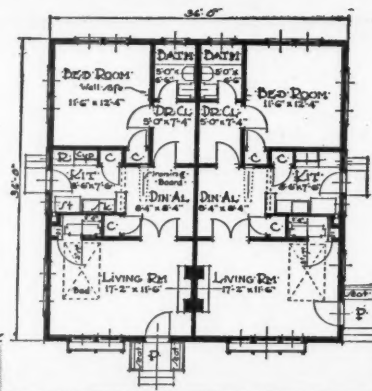
These buildings are examples of the modern trend in homes, apartments, hotels and



THE MURPHY IN-A-DOR BED

THERE IS ONLY ONE IN-A-DOR BED—THE MURPHY

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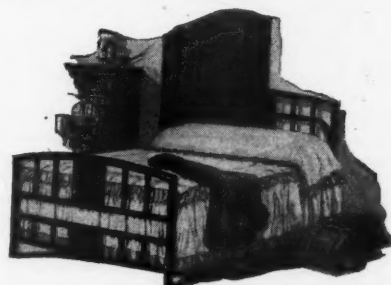
clubs. Their rooms have a two-room efficiency.

Only the Murphy In-a-Dor Bed will swing, in full size, through the standard three-foot door of its concealing closet—a closet accessible at all times as wardrobe or dressing room.

There's a style of Murphy In-a-Dor Bed and a finish that will fit into any furnishing scheme of good taste. All styles and all finishes of this durable, comfortable, easily installed bed are shown in full color in our book—"More Home in Less Space." Send for it. You'll use it every time you talk to a home building prospect.

MURPHY DOOR BED COMPANY

New York City . . . 19 W. 44th St.	Detroit, Mich. 7th Fl., Kresge Bldg.
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Miami, Fla. . . 234 Columbia Bldg.	New Orleans, La. . . 319 Dryades St.
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Not "lumber", not even "pine"—

but **Pondosa Pine**




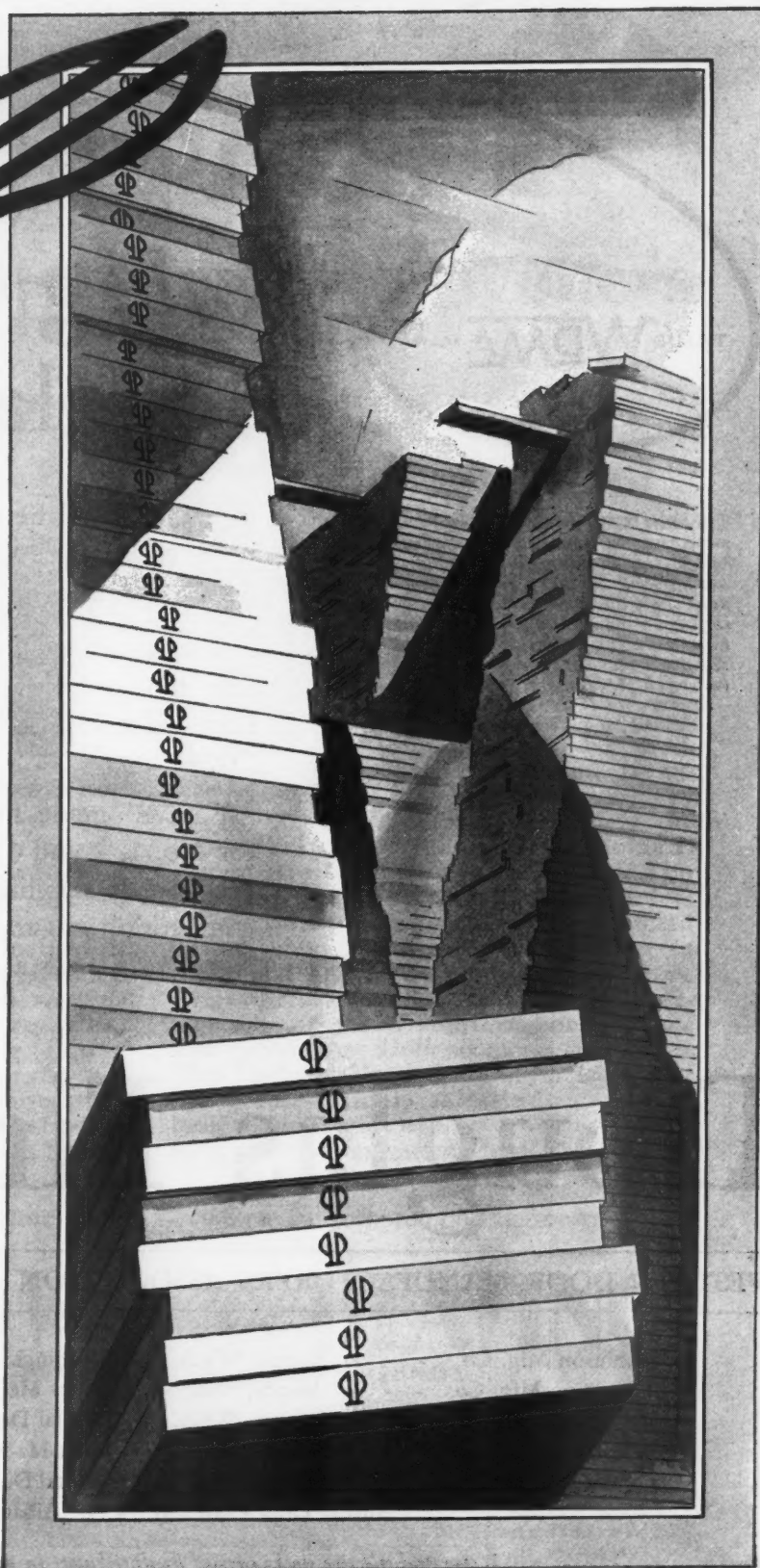
Lumber, one of the most essential of all building materials, has always been the forlorn orphan of industry. A material on whose wise selection so much depends has gone to market, and into construction, uncertified and without identity.

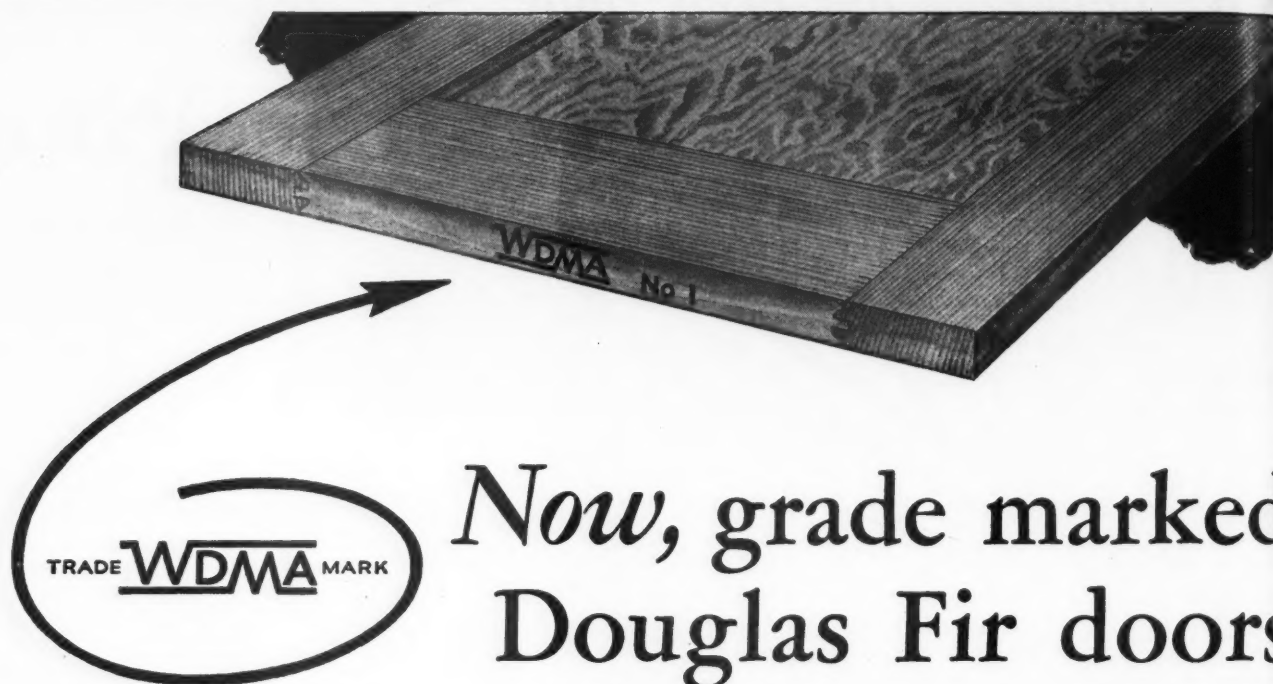
This has been a disadvantage to the lumber industry and the consumer as well. The lumber manufacturer has produced his lumber with utmost care and sent it to the market carefully milled, rigidly graded, and thoroughly seasoned. The lumber dealer has exercised caution in choosing mills from which to buy his stock. The architect has specified the best woods available for each given job. The builder has bought with both eyes open. *But there has been no way to establish the identity of all this quality so carefully developed.*

That condition, however, has been changed. A machine recently perfected and installed in Pondosa mills will now stamp the pine tree trade-mark on the end grain of Pondosa Pine. The builder, home owner or architect can now order Pondosa Pine with the same certainty that he orders hardware, electric fixtures, plumbing or heating appliances carrying the certification of the maker's name.

Pondosa Pine is no longer an orphan. The trade-mark carries with it the assurance that the Western Pine Manufacturers Association stands back of every piece of Pondosa Pine, certifying to its excellence for any soft wood requirement. Buy by the mark. Western Pine Manufacturers Association of Portland, Oregon.

Pondosa Pine 
The Pick o' the Pines





The letters **WDMA** on Douglas Fir doors, made by member mills of this Association, will provide architects, dealers, builders and users with an always available guarantee of quality. It means that the official inspectors of the Western Door Manufacturers' Association have inspected the manufacture and grading of the product bearing this trade mark, and that such doors conform to the standard grades established by the Association.

NO step in the marketing of Douglas Fir doors offers more definite assistance to the builder than grade marking.

The group of manufacturers listed below recognize this and now grade the Douglas Fir doors they make and identify them by the trade mark "**WDMA**."

"**WDMA**" grade marking means a definite grade for No. 1, 2 and 3 doors, guaranteed by rigid inspection. It stabilizes buying . . . eliminates unfair competition . . . and for the builder and contractor, *particularly*, fixes a definite standard.

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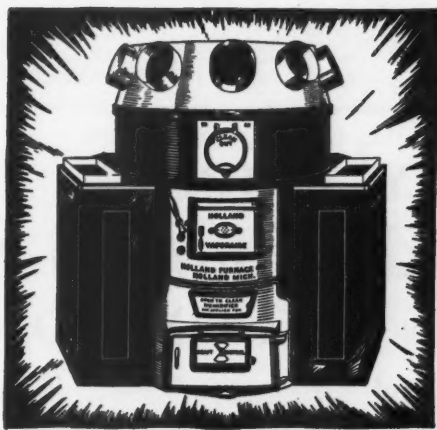
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INTRODUCTION of the Holland Vaporaire Deluxe System offers the up-and-coming builder an exceptional chance to increase the desirability and sales value of his finer homes without extra investment. Advantages heretofore offered only by expensive heating-cooling installations used in modern theaters, schools and hospitals are now provided by a simple, compact Holland plant of reasonable cost and exceptionally low operating expense. It cools the home in summer, warms it uniformly in winter and maintains perfect circulation of clean, filtered air at all times. Forced distribution of measured warmth makes every room comfortable regardless of location or severity of weather. Proper humidity is maintained automatically and thermostatic control permits temperature to be held within two degrees of absolute uniformity throughout the entire house.



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Reclaimed brick and *Winthrop Shingles* MAKE AN UNCOMMON HOUSE

This is a picture of the home of Mr. H. W. Severance, at 10026 S. Winchester Ave., in Beverly Hills, Illinois, an exclusive residential suburb of Chicago. We have reproduced it to show—as well as we can in black and white—the excellence that has been achieved with simple materials through co-operation between Mr. Severance, his contractor and his architect, Mr. Morris Hobbs, of Toledo, Ohio.

Reclaimed brick was laid up, in dark mortar, irregularly and partly skintled for the walls and the color contrast in the house comes from the use of our Greenfield Blend for the roof.

Greenfield Blend is a blend of two greens—sea and mist—and two blues—mist and silver. It is blended at the factory and comes ready to lay. It is, like all other twenty colors of Winthrops, natural slate—crushed and anchored into the everlasting asphalt that covers the extra heavy felt core.



The many Winthrop colors—solid or blended—enable one to select the proper color for any type house in any surroundings.

The many ways in which you may lay Winthrops make it possible for you to lay a number of roofs in the same colors and yet have no two look alike.

Winthrops are the only tapered asphalt shingles with thick butts to lie close, to cast attractive shadow lines, to double the wearing thickness. Winthrops bear the Class C Label of Underwriters' Laboratories. They are unequaled over old roofs.

Samples Free

Winthrops are sold by most good lumber dealers but we believe you could make good use of a set of the Greenfield Blend. They should help you get new and re-roofing jobs. Will you use them? Send today for a set, free. Ask for a sample also of Argotex Building Felt, noted for its insulating qualities.

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SARGENT Hardware of solid time-defying brass or bronze is manufactured to a high standard of quality. It is made to last for years . . . for generations of users . . . for as long as the building in which it is placed shall stand. All moving parts are machined and exactly fitted to insure a minimum of wear and a certainty of quiet, smooth operation. The home owner is assured that, once bought, Sargent Hardware in his house can be forgotten. It is rarely that any piece calls for repair or replacement.

Sargent Hardware is the kind you would use in your own home . . . and in homes that require the best that can be bought. Its efficient, certain operation is equalled by beauty in design. For any style of home, hardware of correct appearance can be chosen from the long list of designs in the Sargent catalog. We are stressing this in our consumer national advertising by advertisements like that from which the illustrations on this page have been taken. Spanish . . . English . . . Colonial . . . French . . . and many other styles are standard in the Sargent line.

This hardware is fairly priced. And, so, it is the best hardware the operation builder can use. In three ways it more than makes up for its slight extra cost over cheap, plated goods. First is the aid it gives in selling. There is a real talking point in Sargent Hardware. The builder can point to it as visible evidence of the excellence of his houses. The national advertising and the consistent, year-in-and-year-out worth of Sargent Hardware have given it a universal reputation that will influence prospects.

They feel that all details of the house are sound and true when they find the hardware so. Secondly, you will never have complaining home owners, or the expense of repairing or replacing hardware shortly after you have made a sale. And, thirdly, important to every builder, it will help you establish a reputation of inestimable value to you in your business.

There are Sargent representatives in all cities who will help you make selections and will furnish estimates. Write for our book of designs, "Hardware for Utility and Ornamentation." Sargent & Company, Hardware Manufacturers, 51 Water Street, New Haven, Conn.



The rich brown-red tones of the Marmion room are set off by the gleaming hardware on its door. On the inside is a heavy, brass rim lock. On the outside, a small knob and bright keyplate. Designs similar to these are manufactured by Sargent in present-day New England.



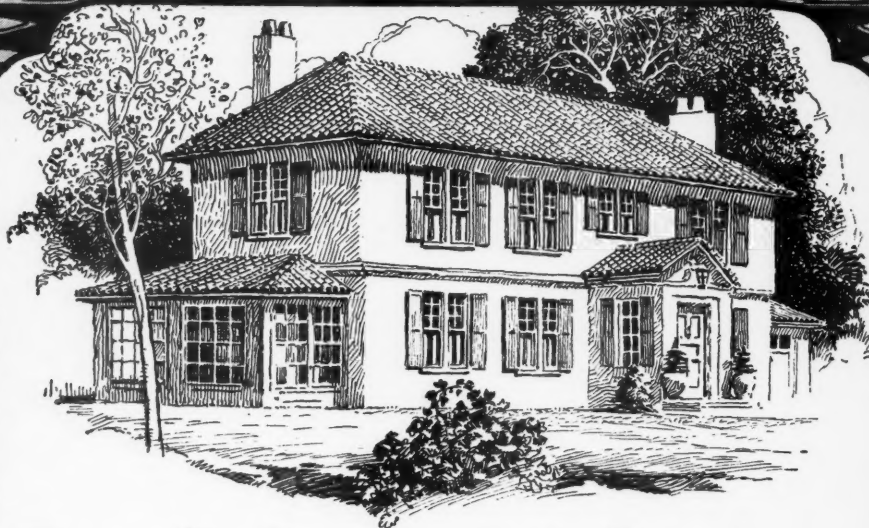
This plain brass knob and keyplate is similar to that on the Marmion door. Ask for knob No. 1602 and keyplate 711. Sargent makes a brass rim lock, too, No. B3525B in the list of designs. The door knob of cut glass and the quaint tear-drop keyplate are unostentatiously decorative, and give a trim appearance to interior Colonial doors. Knob No. 2018. Keyplate No. 817.



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Arch Lath is a plaster saver! Due to a distinctive arch design, only the correct amount of plaster is permitted to squeeze through the openings for perfect "key". There is no piling up of plaster between walls, the hidden waste that runs up the plastering bill.

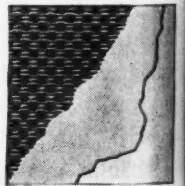
Arch Lath is a time saver! Immediately after application, the first coat of plaster may be scratched and made ready for the second coat. There is no delay, waiting for plaster to dry. There is no need to remove and re-erect scaffolding. The sheet of Arch Lath is so RIGID that it takes the force of the trowel without "giving" at any point thereby assisting rapid, efficient workmanship.

Arch Lath is a labor saver! Because it is nearly a solid sheet of steel, Arch Lath is very rigid and therefore easy to handle and erect. One man can place the sheets and nail them up. Nail hole starters facilitate application.

Arch Lath—the ideal plaster base!

A firm scratch coat is possible on Arch Lath because the arches "grip" the plaster at many angles. This security is best demonstrated by the fact that one sheet of Arch Lath (27"x96") grips the plaster at 8064 points. It is because of this perfect anchoring that the new plaster texture effects are properly executed on Arch Lath at low cost.

Let us send you additional information and a sample of Arch Lath for close-up inspection.



One sheet of Arch Lath (27 x 96) grips the plaster at 8064 points; making the wall an integral unit of rigidity and strength, while minimizing possibility of cracking.

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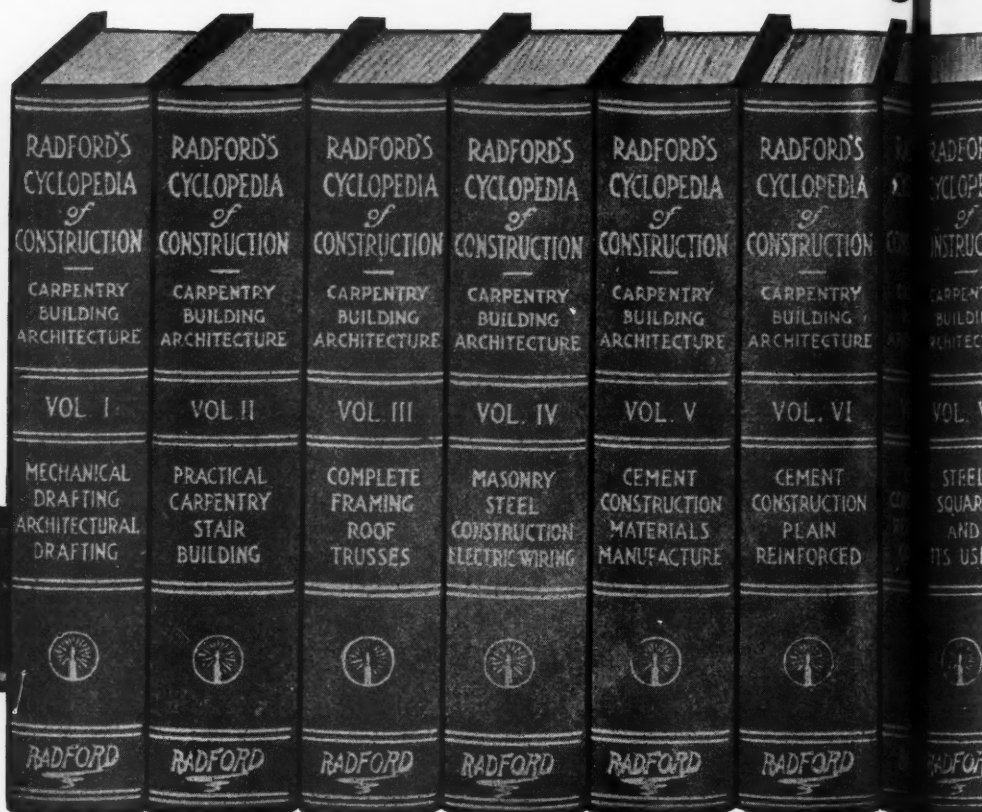
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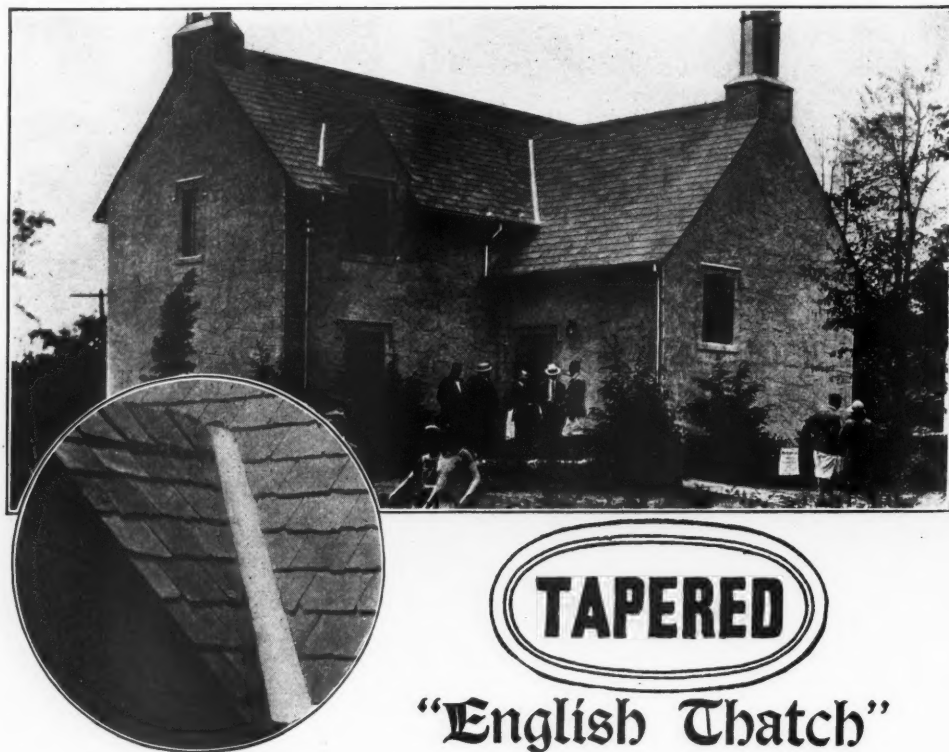
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Ambler Asbestos Shingles

The Ideal, Fireproof, Weatherproof, Roofing were selected by the Lehigh Portland Cement Company for the roof of their Prize House. The enlarged insert of an actual close up photograph shows the definite charm and distinctive effect of this unique product, the **"English Thatch"** in random widths, irregular courses and rough texture that completely eliminated hard and fast lines and sets a new roofing standard giving a novel beauty to the modern home and an added degree of serviceability to a roof.

First of all, Tapered Ambler Asbestos Shingles have the taper of the old wooden shingles. They come in random widths 6 in. to 14 in., $\frac{1}{8}$ in. thick at the top and $\frac{1}{2}$ in. at butt and 20 inches long. They are **strong, rigid shingles**, not paper or rag felt, never curl or warp, not affected by the blasts of winter, the heavy rains of spring and the blazing heat of summer, year in and year out, for they are made of Asbestos and Hydraulic Cement—Nature's imperishable materials.

They are made in a variety of non-fading colors: Green, Red, Brown, Gray, etc.

FIREPROOF

Tapered Ambler Asbestos Shingles are absolutely fireproof, not merely "fire-resistant." Ask your fire insurance agent what the difference is. He will tell you the difference and show you the saving in rates—a matter of serious consideration over a term of years and years. It will pay you to write us now for complete information covering these superior shingles.

Made by the AMBLER ASBESTOS COMPANY, at Asbestos, Penna., and sold by the

**ASBESTOS
SHINGLE, SLATE & SHEATHING CO.**
AMBLER, PENNA.

or Branch Offices in large Cities

"ASBESTOS CANNOT BURN"

FOR ADVERTISERS' INDEX SEE NEXT TO LAST PAGE

EVERY KNOWN KIND OF INSURANCE



J.C. FERGUSON REALTY
COMPANY INC.
 NOTHING BUT RESIDENTIAL PROPERTY
 WE HAVE THE FACTS - LET'S DISCUSS IT.

J. C. FERGUSON, President
 R. FLETCHER, Mgr. Insurance Dept.

610 GRAND AVENUE
 PHONE WALNUT 991

“... the FACE BRICK house is by far the easiest to sell”

Des Moines, Iowa
 June 8th, 1928

American Face Brick Association,
 130 North Wells Street,
 Chicago, Ill.

Gentlemen:

For \$8,500.00 or less, we are building to order in Des Moines attractive and substantial Face Brick houses of six or seven rooms.

Ninety-five per cent of the houses we build are of Face Brick. The excellence of the houses we have sold during the last few years and our easy financing plan -- made practical by the way Face Brick dwellings hold their value -- keeps our crews busy building to order. Our 1928 program promises to reach forty houses.

Many prospective buyers refuse to look at any but Face Brick homes. The advantages of this type have been so well established through advertising and person-to-person recommendation that the Face Brick house is by far the easiest to sell.

Yours very truly,

J. C. FERGUSON REALTY COMPANY, Inc..

By *Richard L. Tuell*
 Treasurer.

THE added salability of Face Brick houses has become so pronounced that many builders now find it good business to specialize in homes built of Face Brick. Four years ago J. C. Ferguson Realty Company, Inc., Des Moines, began building Face Brick houses to sell. Quick and profitable sales were the result. And today their crews

are kept busy building only to order. Their experience, as told in their letter above, is typical of the thriving, substantial business which is the result of using Face Brick. Builders tell us that our literature and house plans are a real aid in building and selling. May we send you information concerning them? Send your letterhead or card to

THE AMERICAN FACE BRICK ASSOCIATION

2163 City State Bank Building, Chicago, Illinois

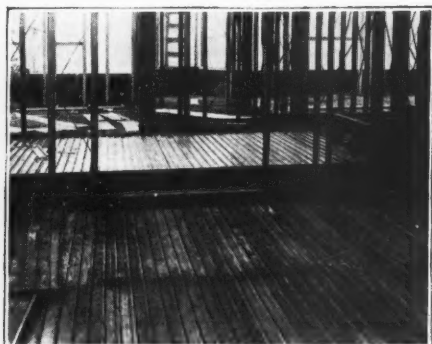
FACE BRICK

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

The All-Steel Residence is a Practical Reality

Today's home-builder welcomes the advent of steel . . . long the basis of much industrial and commercial building construction . . . in to the realm of residence building.

The All-Steel residence is no longer a mythical thing to be dreamed about and hoped for. It is here in reality.



Typical steel floor construction, showing patented, formed Sheet Steel support and reinforcement for concrete floor.

In all parts of the country, there is a trend toward a broader and broader utilization of Sheet Steel in the construction of residences. Pressed and fabricated into the form of beams, studding and rafters, members which can be delivered to the scene of operation ready for erection, are being util-

ized for framing by builders, who claim that the greatly reduced labor expense and the saving of time practically offset the increased material cost.

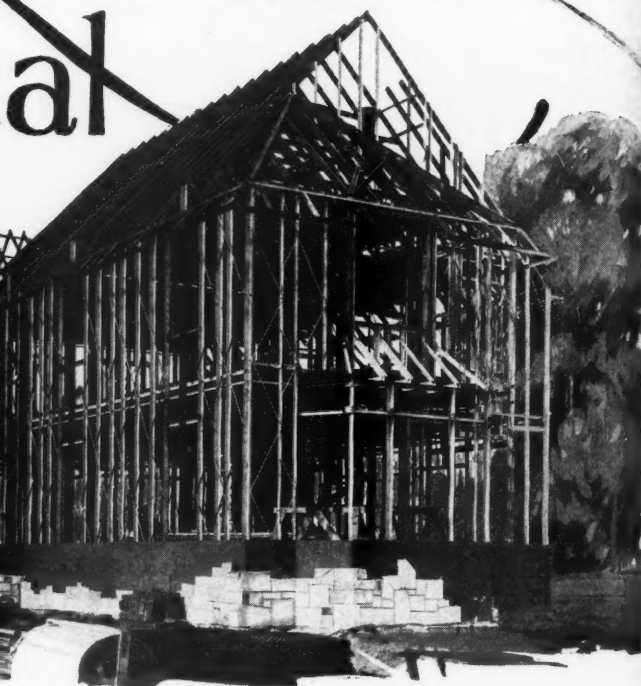
As a reinforcement for floors, as a base for plastered walls and ceilings, as doors, sash and trim, as stairs, and as roofing, Sheet Steel very efficiently supplements the frame, in the construction of

what may be justly termed the "all-steel" house.

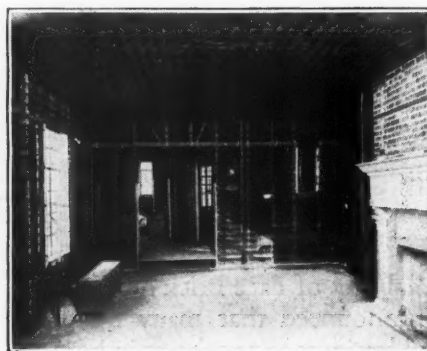
Interested builders will be placed in touch with responsible

manufacturers of various types of units for the fabrication of steel residences if they will write to the SHEET STEEL TRADE EXTENSION COMMITTEE,

TERMINAL TOWER BUILDING, CLEVELAND, OHIO.



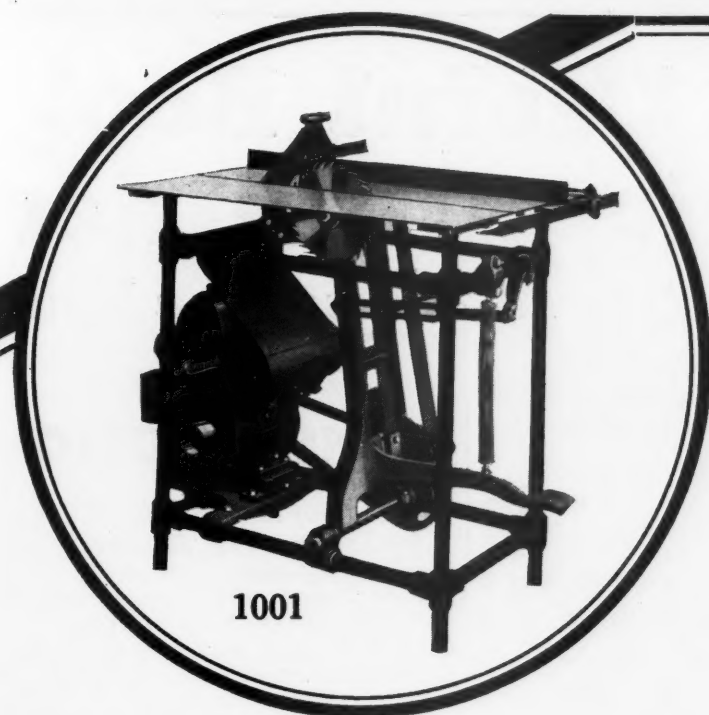
General view of typical steel frame for residence, erected in a fraction of the time necessary for old-type residence framing.



Interior view of all-steel house, illustrating application of steel lath to steel framing, by means of wire ties.

SHEET STEEL

for Strength Safety Beauty and Economy



1001

"One Thousand and One"
Monarch

TRADE MARK

**CONTRACTORS' PORTABLE
TREADLE SAW**

"One Thousand and One"! Well named for it has One Thousand and One Uses, and incorporates One Thousand and One Advantages.

Some of them are:

- Portability**—
as convenient to use on the job as in the shop.
- Lightness**—
weight with engine ONLY 420 lbs.
- Strength**—
built for hard steady service day in and day out.
- Power**—
more than enough for a 3" cut.
- Adaptability**—
tables—of finished steel—may be moved away from saw and locked in any position allowing free access to saw and the use of a dado of any width. Now regularly furnished with adjustable feet.
- Low Price**—
only \$220.00 with 1½ H.P. Gasoline Engine
200.00 with 1 H.P. Electric Motor
120.00 without power

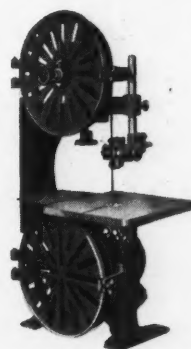
Number One Thousand and One has all the inherent qualities of fine workmanship that make the Monarch line the choice of the more particular contractors and builders.

Send for full details and prices on the machines you are interested in. We specialize on a full line of latest type wood working machinery and contractors' equipment.

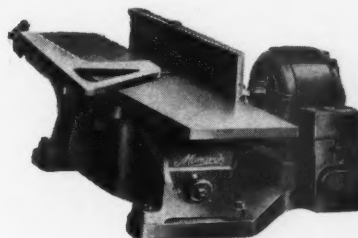
AMERICAN SAW MILL MACHINERY CO.

60 MAIN STREET

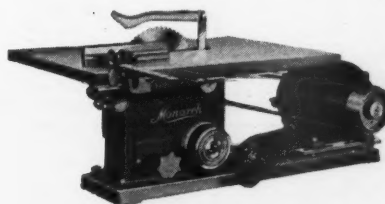
HACKETTSTOWN, N. J.



No. 983 — Bench Band Saw. 12" and 16" sizes. Indispensable in almost any shop. May be operated from a lighting current or by belt from any kind of power. Handy—Adaptable—Sturdy.



No. 963 — 6" Bench Jointer. Strong, yet light, built for hard continuous industrial use. Arranged for direct motor drive or belt drive, and furnished with ball or babbit bearings as ordered.

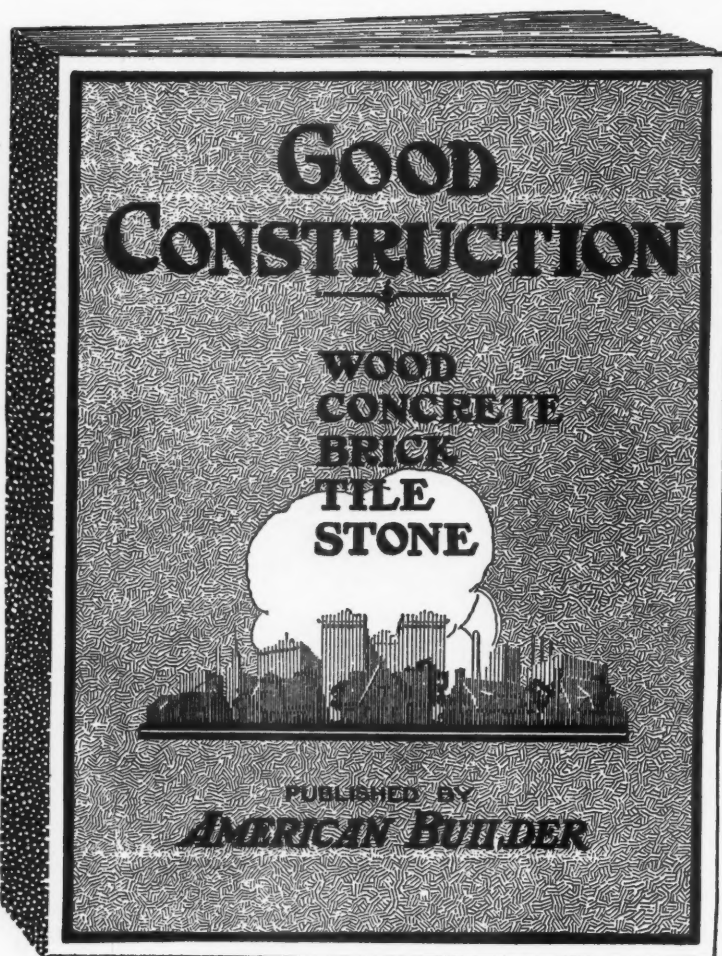


No. 973—Bench Variety Saw. Not built to a price for occasional home use, but a thoroughly dependable industrial machine with highest grade machine work yet moderate price. Table tilts to any angle up to 45 degrees. Fully enclosed motor with fused switch.

Another Useful Book

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160 pages—size 8 $\frac{3}{8}$ x11 $\frac{1}{8}$ inches

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THE AMERICAN BUILDER

1827 Prairie Ave., Chicago, Ill. _____ 1928

Enclosed find \$2.00 for which ^{Enter} ~~Renew~~ my subscription to
The American Builder for one year and send me free and
postpaid, a copy of your book "Good Construction."

A.B.-7-28

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BOX No. _____

P. O. _____

STATE _____

My occupation is (Check only one)

☐ Dealer

☐ Builder

☐ Architect

☐ Real Estate

☐ Miscellaneous

GOOD CONSTRUCTION

One of our latest books of clearly drawn plates and descriptive text
—covering recommended construction in Wood, Concrete, Brick, Tile and Stone for residential and other construction.

This book will be of great help to every practical builder. Limited space prevents a complete summary of the contents, but some of the more important subjects covered are:

Details of Home Building—Basement windows; The outer doorway; Window treatment; Roof lines; The living porch; The fireplace; The house stairs; The kitchen; The Gambrel and other roofs; Below the floors.

Elements of Structure—Concrete, masonry and stucco; Values in siding; Stuccoed walls; Brick veneer; Hollow tile; The brick house; The stone house; Thatched roofs; Slate and stone roofs.

There are **SIX FULL PAGE PLATES** detailing the recommendations of The National Lumber Manufacturers Association for standard mill construction.

Other chapters deal with Floors of various kinds; Wallboard; Hardware; Electrical and gas equipment; House insulation and its relation to the heating problem; Fire-safe chimneys; The cause and cure for efflorescence; Quick hardening concrete; Plastering, including lime plastering, gypsum plasters and their application on various types; Framing for Stucco construction; recommendations for proper stucco application and Correct heating principles.

How to Get Your Copy

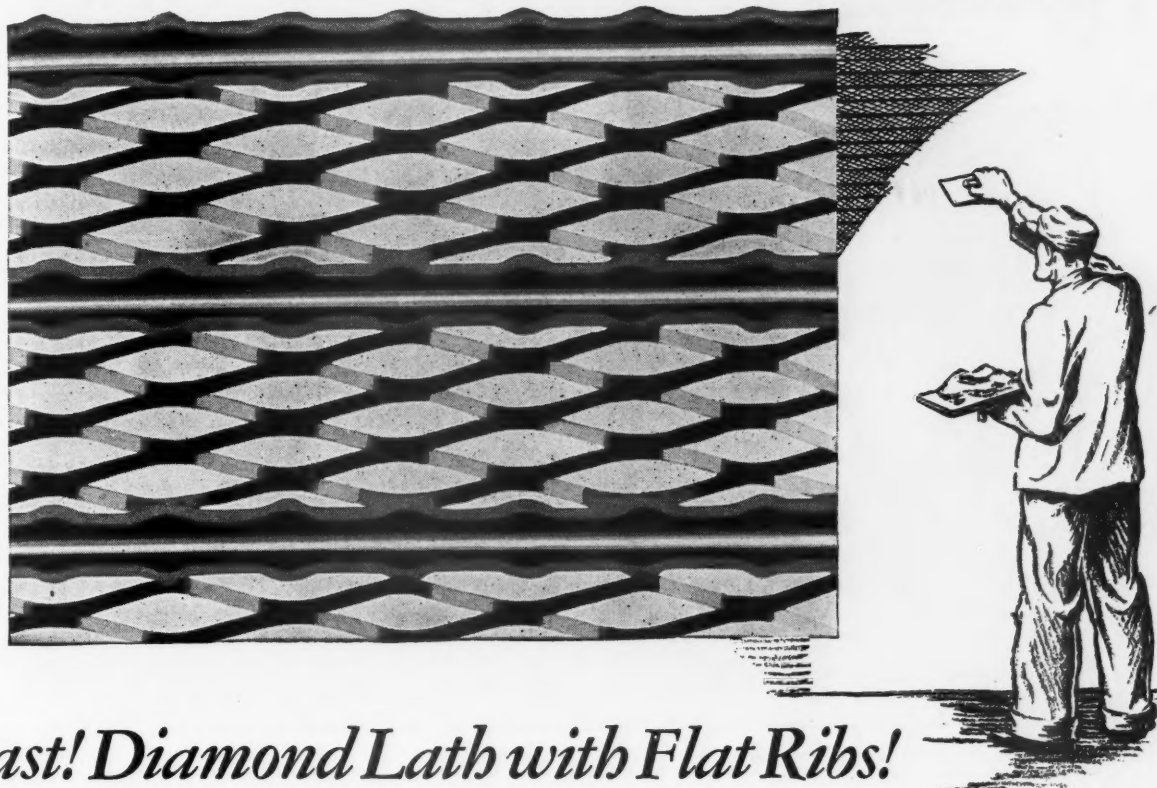
You may have a copy of this big useful book—"GOOD CONSTRUCTION"—Absolutely Without Cost, with a subscription to American Builder at the regular price of \$2.00 a year.

The subscription may be your own or for a friend—It can be new, renewal or an extension of a subscription already on your list. (We will add the new subscription to the old one.)

In all cases, the subscription must be sent direct to American Builder by mail and accompanied by check, money order or currency for \$2.00. If sent in any other manner—the subscription will not entitle sender to the free book.

*Offer good in U. S. and Canada.
Add \$2.00 to Foreign Countries.*

Steelcrete Diamond Flat Rib Lath



At last! Diamond Lath with Flat Ribs!

A POPULAR type of plaster base because of superior mechanical bond, Diamond Mesh Lath *now* becomes an overwhelming favorite with the trade. The combination of Steelcrete Diamond Mesh with a Flat Rib, producing a plaster base of exceptional merit—both as a plaster saver and as a reinforcement.

This new product known as Steelcrete Diamond Flat Rib Lath is easy to plaster, easy to erect and requires less plaster per square yard than ordinary metal lath. The rib design sets up a resistance against the entire field of lath and prevents an excess of plaster from

squeezing through the mesh. This rib also serves to give unusual strength to the entire sheet of lath and acts as a guide for the plasterer.

The sheets of Diamond Flat Rib Lath are fully expanded from end to end and corner to corner. They are *clean* and will not cut the hands, facilitating quick erection. Let us send you samples and prices. Write us today.

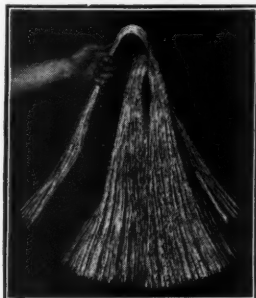
Specifications:

Size of sheet 24"x96". Packed 9 sheets per bundle, 16 square yards. Weight painted 3.4 lbs. per square yard.

Consolidated Expanded Metal Companies, Wheeling, W. Va.

Steelcrete Building, Wheeling, West Va.

Atlanta Boston Cleveland Philadelphia Pittsburgh
Chicago New York Buffalo



Steelcrete Lathers Tie Wire

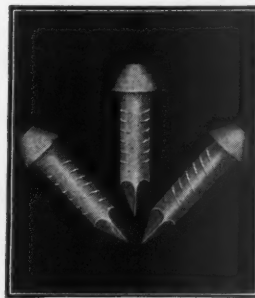
Here is a Tie Wire designed for the Lather. A product of unusual strength, yet soft and pliable for quick and efficient workmanship. Wrapped in sanitary packages, a safeguard to the Lather like sterilized nails. Supplied in hanks 25 lbs. each.



Sample Offer

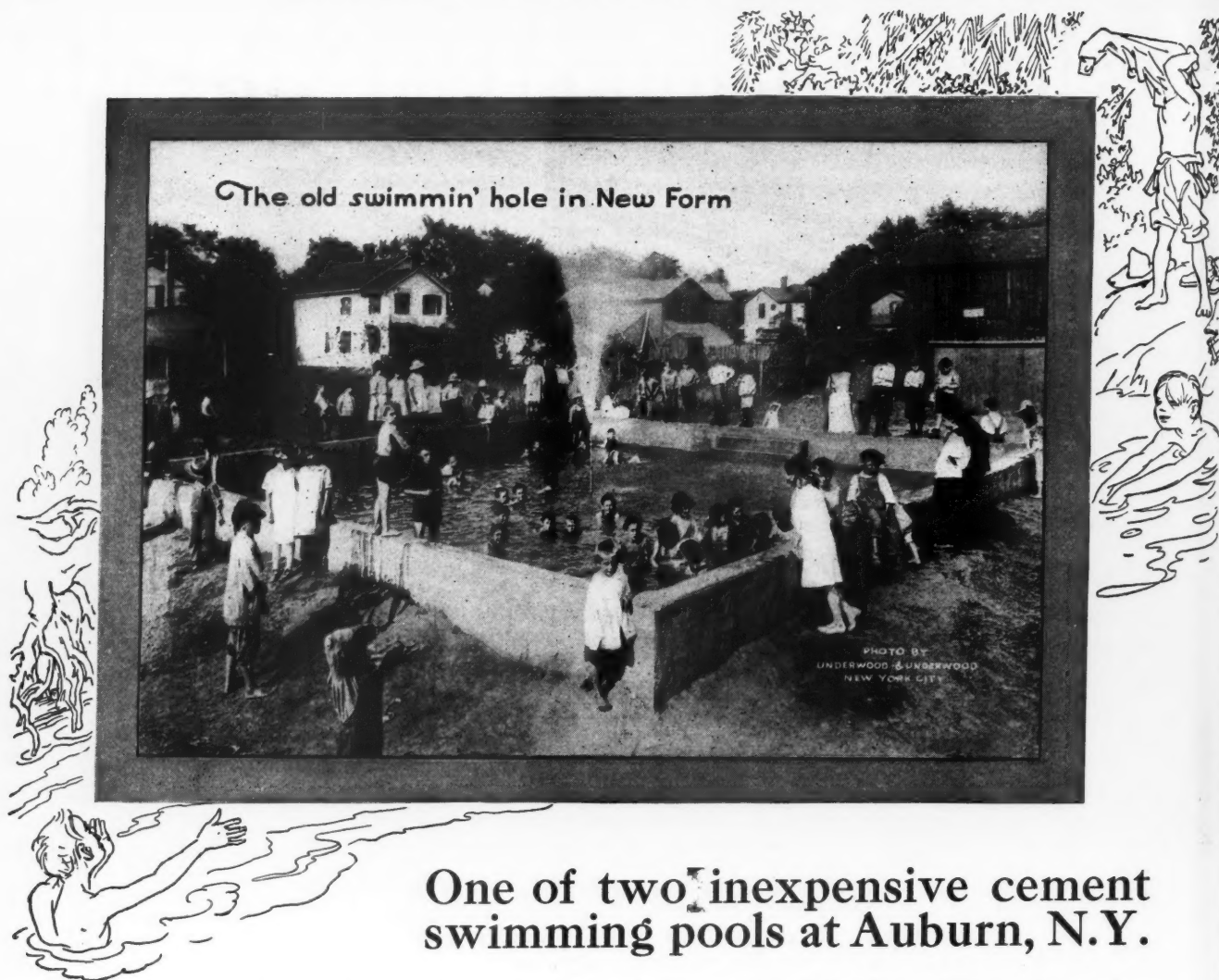
You may obtain on request, samples of the Steelcrete Time Tested Building Products described in this advertisement and complete information on other Steelcrete Products, including Arch Lath, Diamond Lath, Rib Lath, Wall Ties, Cornerite, Metal Base Ground, Curved Point Base Screed, Metal Picture Mould, Cold Rolled Channels, Corner Bead, T-Rail Bead, Bull Nose Bead and Expanded Bead.

Write to us today



Steelcrete Stub Nails

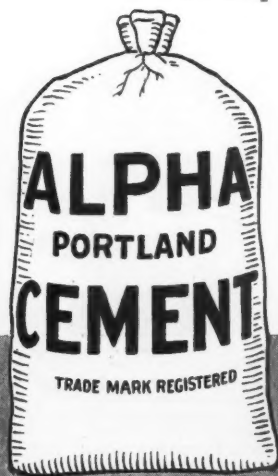
Here is the Nail you can drive into Concrete without bending, breaking or blunting the point. Heavily zinc coated. Comes packed 1000 to the bag; also in 100 lb. kegs. The ideal nail for securing corner beads, metal lath and hangers.



One of two inexpensive cement swimming pools at Auburn, N.Y.

The Auburn pools are thirty feet square and thirty inches deep. They are safe for the tots to wade in and yet deep enough for the older ones to float and swim. The water is changed and the pools are cleaned out every day. The playground manager is on the spot to see that no accidents occur and to give instruction in swimming.

As shown in our picture, the pools are well patronized, and the City Engineer, Mr. J. J. Tehan, tells us, "The Children are crazy about the water and it is doubtful now if the swimming pools could be dispensed with."

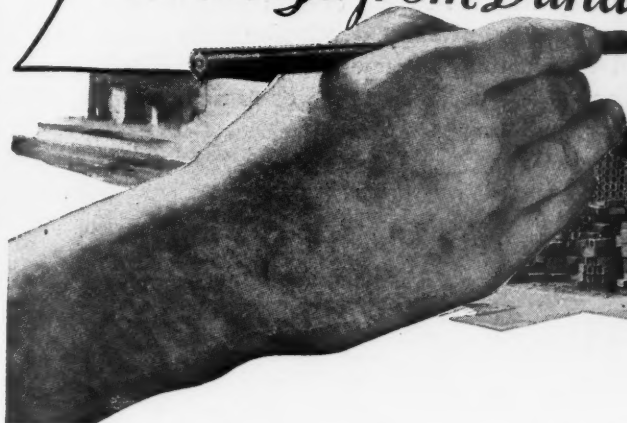


The ALPHA CEMENT Handbook, 112 pages, illustrated, and special information on swimming pools, sent free on request.

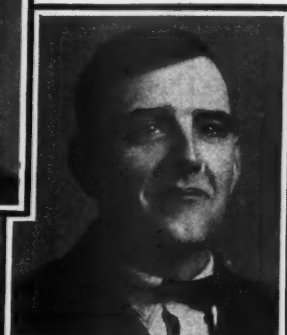
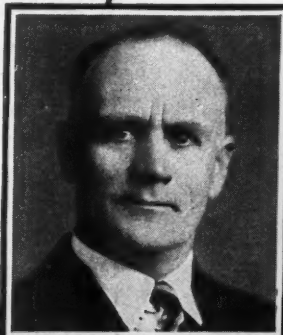
Alpha Portland Cement C O M P A N Y

<i>Baltimore</i>	<i>Battle Creek, Mich.</i>	<i>Birmingham, Ala.</i>
<i>Boston</i>	<i>Chicago</i>	<i>Easton, Pa.</i>
<i>New York</i>	<i>Philadelphia</i>	<i>Pittsburgh</i>
		<i>St. Louis</i>

*Salaries paid -
Machinery ours -
A new 2½ acre
Manufacturing Site -
out of 18 months
earnings from Duntile*



Frank K. Coffeen, left, and Frank F. Thompson, below, contractors and masons of La Porte, Ind., whose modest start with Duntile has already yielded them a good living, paid for their machinery and put them in a position to expand on a large scale.



vision and ambition together with this little plant have proven to Coffeen and Thompson that through Duntile, even with very little capital, one can break into the manufacturing class.

A FEW months ago, Frank K. Coffeen and Frank F. Thompson were like hundreds of other contractors and builders—making a fair living but finding at the end of each year that the uncertainties and gambles of their business left them about where they started.

Then they heard of Duntile. Skeptical at first, they investigated carefully—decided that what others could do, they, too, could accomplish.

Started Under Big Handicaps

Getting capital together was not easy. But they made a start, followed the methods of Lind, Frauenfelder and other prominent Duntile manufacturers and soon saw that they were on the right track. They found that they could easily underbid on permanent masonry building jobs, due to the low cost of building with Duntile. Yet, thanks to the efficiency of their Duntile plant, they also made a good margin of profit on the manufacturing end.

Growth Beyond Expectations

Progress was more rapid than they had anticipated. The color possibilities of Mat Glazing gave them a broader market than they realized. Every building erected of Mat Glazed Duntile became a conspicuous salesmaker. One man told another about the savings he enjoyed, while the colorful beauty of the Duntile structures spoke for itself.

Today there is hardly a street in La Porte where Duntile is not represented in some sort of construction. Here a basement, there a garage, over here the back-up in an apartment or school, there a colorful mat-glazed home. The adaptability of Duntile which is such an advantage to a contractor also worked to their manufacturing profit, for a steady flow, even of small orders totals into thousands of Duntile units.

The Proposition Proved Out and Means to Go Ahead

Now, Coffeen and Thompson are in a particularly good position. They have proved out for themselves in their own way that their business is sound. And they have the means to expand. They have already purchased a 2½ acre tract between the Nickel Plate and New York Central tracks where they are prepared to erect a full-scale, industrial plant with added machinery and a production rate that will multiply the earnings that actual operation has proven possible.

DUNTILE
THE PERFECTED ALL-PURPOSE CONCRETE BUILDING UNIT
Working Specifications in "Sweet's"

Will You Learn What They Know?

Through actual experience, Coffeen and Thompson have demonstrated each of the famous characteristics of Duntile. Its wide range of uses. Its strength. The easy laying and value of its full mortar bed. The fact that it builds fine permanent construction at as low a cost as frame, and therefore attracts wide interest from the public.

Capitalizing on the facts and advantages of Duntile, these men have made real progress. Will you look over the data that started them thinking? Will you, too, risk a postage stamp to get "Basic Facts," the book that tells the story of Duntile's growth throughout the country—the 400 manufacturers now supplying it, the methods by which men have obtained Duntile plants and operated them at good profits? The coupon is convenient. Send it today. Then with the facts before you, make up your own mind.

W. E. DUNN MFG. CO.

415 West 23rd Street
HOLLAND, MICHIGAN

**This BOOK
TELLS HOW**

W. E. DUNN MFG. CO.,
415 W. 23rd St., Holland, Mich.

7-28

- ☐ Show me, through your book, "Basic Facts," how I can win manufacturing independence by supplying Duntile in my community. Show me how I can manufacture Duntile in a plant of my own at a profit of 30 to 60 per cent.
- ☐ Show me how I can build permanent masonry walls at cost of frame, and make more money for myself.

Name.....
Street Address.....
City..... State.....

THIS MODERN TREATMENT BRINGS UNUSUAL BEAUTY

This fountain and back-bar, done in modern style, is an interesting example of the many beautiful and unusual effects which can be obtained with Vitrolite—the vitreous slab material. This installation is in the Hotel Schroeder, Milwaukee, Wisconsin; Holabird and Root, Architects.

Only Vitrolite can be adapted to special decorative treatments, which harmonize with any interior design. Only Vitrolite assures everlasting beauty, sanitation and utility. None of the substitute materials can give you these advantages.

The Vitrolite Service Department in collaboration with the architect, designer or owner is constantly developing soda fountains, table tops and wainscotings in new designs, colors and textures to harmonize with any decorative plan or to match any interior. Write for information.



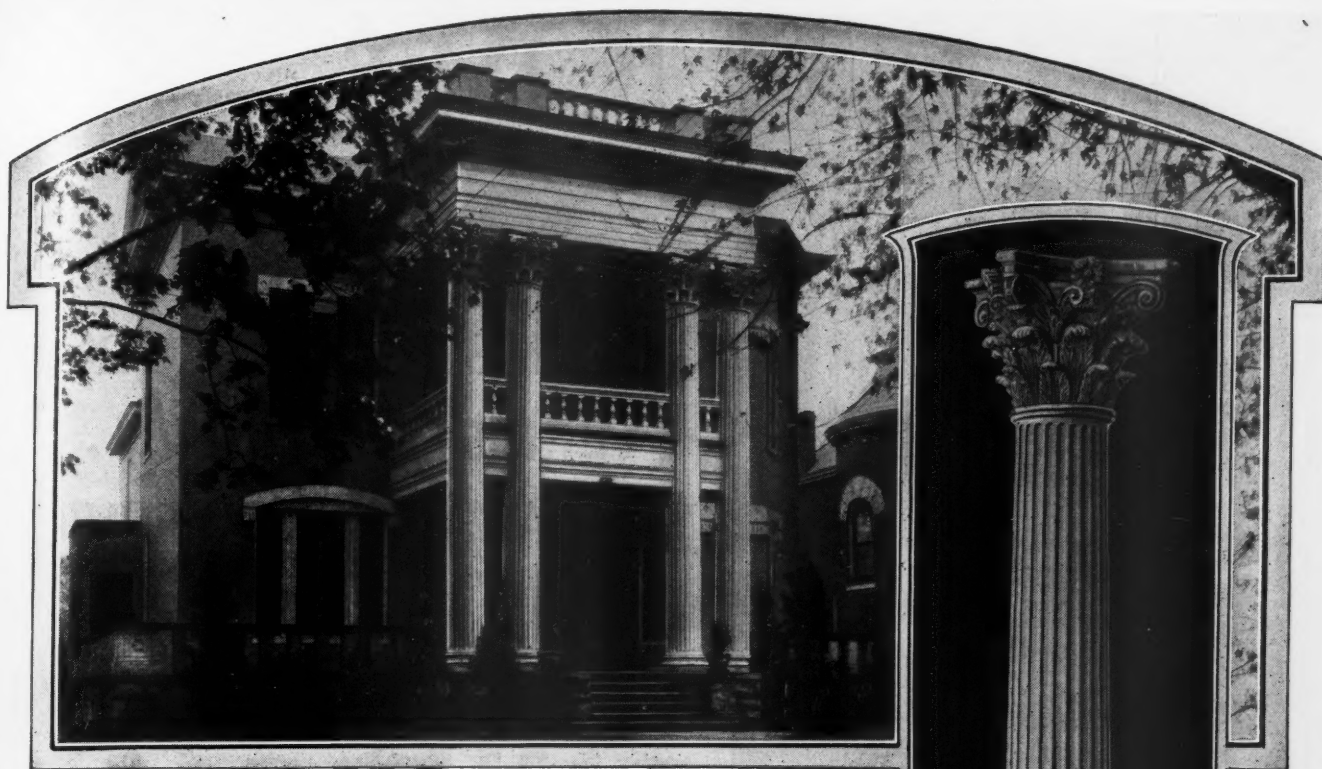
VITROLITE

THE VITROLITE COMPANY

120 South La Salle Street, Chicago

—SALES REPRESENTATIVES—

Atlanta	Baltimore	Boston	Brooklyn	Buffalo	Cincinnati	Cleveland
Dallas	Denver	Detroit	Kansas City	Los Angeles	Miami	Minneapolis
New Orleans	New York	Omaha	Philadelphia	Pittsburgh	Portland	
Providence	San Francisco	Seattle	St. Louis	Tampa	Washington	
Colombia, S. A.	Copenhagen	Havana	Johannesburg			
London	Melbourne	Mexico City	Montreal			
Osaka	San Juan	Shanghai	Vancouver, B. C.			



Residence of Charles Mitchel, Lexington, Ky. Frankel and Curtis, Lexington, Architects. Union Metal Columns No. 212

A Product of this Age of Steel

When Union Metal Columns are installed on a building, all danger of failure in this item of construction is eliminated. For these stately columns, reproducing the designs of the classic orders, are fabricated from enduring copper-bearing steel, and galvanized inside and out to prevent rust and corrosion.

In ten, twenty, thirty years, these columns will continue to impart a touch of unmistakable quality to the building they adorn. The clean-cut lines preserve their sharpness despite the ravages of time and weather. And yet Union Metal Columns cost little more than less durable types.

You will be interested in learning the complete story of Union Metal Columns. It is told in our latest catalogue which will be mailed to you on request.

THE UNION METAL MANUFACTURING COMPANY

General Offices and Factory: Canton, Ohio.

Branches — New York, Chicago, Philadelphia, Cleveland,
Pittsburgh, St. Louis, Los Angeles, San Francisco, Jacksonville

UNION METAL COLUMNS

*Union Metal Design
No. 212. One of ten
classical designs made
in diameters from 8" to
42" and heights 5' to 35'.*



EACH YEAR'S
INCREASING SALES PROVE
AERO's *popularity...*
...EACH YEAR'S SERVICE
PROVES **AERO'S**
dependable performance

Each year since the Aero Radiator was first introduced, sales have mounted by leaps and bounds. Each year the service given by these installations, in all sorts of buildings, in all parts of the United States, Canada, and foreign countries, has convincingly proved the fine

dependable performance of the complete Aero line.

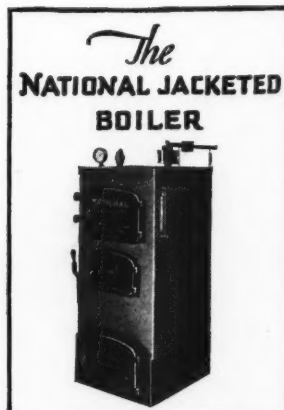
Aero's ever-growing popularity has led to many imitations. But none can show the record of proved performance on actual installations of every character, that stands as your best guarantee of Aero Radiator satisfaction.

NATIONAL RADIATOR CORPORATION

MANUFACTURER OF RADIATORS AND BOILERS

Ten plants devoted to National Service through these Branch Offices and Warehouses:

Baltimore, Md.—2622 Frisby Street	Boston, Mass.—93-97 Oliver Street	Milwaukee, Wis.—124-130 Jefferson St.	New York, N. Y.—55 W. 42nd St.
Buffalo, N. Y.—259-265 Delaware Avenue	Cleveland, Ohio—935 E. 63rd Street	Louisville, Ky.—1126 W. Breckinridge St.	Philadelphia, Pa.—121 N. Broad St.
Chicago, Ill.—2445 N. Keeler Avenue	Cincinnati, Ohio—Spring Grove and Elmira Avenue	Omaha, Neb.—108-112 S. Tenth St.	Pittsburgh, Pa.—1509 Arrott Building
Indianapolis, Ind.—431 W. Georgia Street	Johnstown, Pa.—221 Central Ave.	Richmond, Va.—3032 Norfolk St.	St. Louis, Mo.—1042 Central Industrial St.
	Washington, D. C.—2205 Fifth Street, N. E.		



The National Jacketed Boiler has a trim, durable, dust-defying empire green jacket, that houses a dependable, efficient boiler. It burns hard or soft coal, coke, oil or gas. It is furnished for either steam, vapor, or hot water systems.



AERO
THE NATIONAL
RADIATOR



AROUND *the* FAMILY TABLE



Sure Thing

Boss: "There's Jim carrying two ladders at a time, and you're only taking one."

Pat "Sure, he must be too lazy to go back twice!"



That's Different

"Parson," exclaimed Ephraim, "I'se got 'ligion, I tell you."

"That's fine, brother! You are going to lay aside all sin?"

"Yes, suh."

"You're going to church?"

"Yes, suh-ree."

"You're going to care for the widows?"

"Sho' am!"

"Are you going to pay your debts?"

"Suh? Dat ain't 'ligion. Dat's business."



How Much?

No one enjoys the joke about the hardboiled purchasing agent more than the p. a. himself. It was told at the convention how a salesman rushed down the street excitedly and made for a police station. "I've just killed a purchasing agent," he confessed to the sergeant. The sergeant switched his chew and replied: "You've come to the wrong place. You have to go to the sheriff's office to collect the bounty."—*Southwestern Purchaser*.



Send Us One, Too

Salesman—"This washing machine will pay for itself, sir."

Prospect—"Well, as soon as it has done that, you can have it delivered to my house."



So Are We

"Have you any difficulty meeting your expenses?"

"Not a bit, I'm always running into them."—*Spinnerette*.



Crippled Industry

"Jedge," a very large and determined colored woman announced as she ushered a frightened ex-husband into His Honor's chamber, "dis nigger ain't paid me one cent ob alimony for sebben months."

"What's the matter, Sam?" sternly inquired the judge. "Haven't you been working lately?"

"No suh," was the response. "Ah ain't bin able to find mah dice."—*Country Gentleman*.



Lost Opportunity

Isaac (adrift on raft): "Look, Moe! I see a sail!"

Moe: "Vat's the use? We have no samples!"



That Unearned Increment

A farmer received a crate containing some fowls. He wrote to the sender, informing him that the crate was so badly made that it had come to pieces when he was taking the hens home with him and they had all escaped, and, after much searching, he had only succeeded in finding eleven of them. In due course he received the following reply:

"You were lucky to find eleven hens, because I only sent you six!"



The First Qualification

"So you figure my boy will be a big executive some day?"

"Yes, it always takes him so long to eat his lunch."

—*Lafayette Lyre*.



A Good Idea

"I 'ear the men 'ave gone on a strike."

"What 'ave they struck for?"

"Shorter hours."

"I always said as 'ow sixty



What For

Merchant—"Before I engage you, you will have to pass an intelligence test."

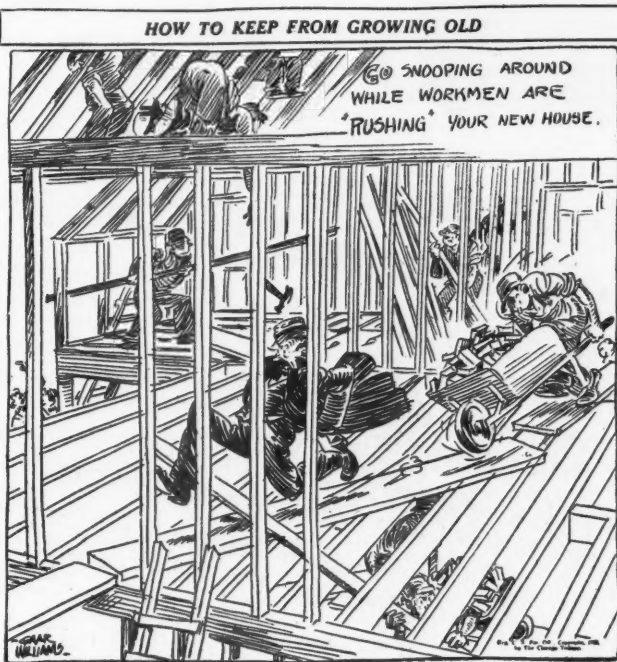
Girl Candidate—"Intelligence test? Why, the advertisement said you wanted a stenographer."



In Every Trade

Pompous physician (to man plastering defective wali): "The trowel covers up a lot of mistakes—what?"

Workman: "Yus, gov'nor—and so do the spade."



[Reprinted by permission of the Chicago Tribune.]

SANITAS

MODERN
WALL COVERING



Decoration and Protection for Walls and Ceilings

There is no doubt that a decorated house is easier to sell than one with bare plaster walls.

Women do respond to the appeal of beauty and color, inherent in Sanitas, the original, cleanable cloth wall covering.

There are styles for every room in the house, finishes, patterns and colorings to meet any decorative requirement.

Then, the strong cloth on which Sanitas is made, prevents wall and ceiling cracks from breaking through this wall covering. Sanitas really helps sell houses because it is nationally known as a standard material with a quarter of a Century reputation back of it.

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Building Trend Is Upward

AT this particular time when general business tendencies are somewhat uncertain and indefinite, it is of value to note that the building industry has the appearance of progress, according to the monthly building survey by S. W. Straus & Co. This survey states that reports from 562 leading cities and towns in every section of the 48 states revealed a gain in building permits issued in May amounting to 4 per cent as compared with the same month last year. The figures were \$374,889,045 and \$361,234,801.

These reports comprise a restoration of the upward curve of building activities, a somewhat disquieting downward trend having existed since the end of March, it is stated. It will serve a useful purpose to recall, at this time, the year's building trend as revealed in terms of building permits. In nearly 600 cities and towns, which contain more than 80 per cent of the urban population of the country, there was a gain in January of 8 per cent and in February of 7 per cent. The curve then turned downward with a loss in March of 4 per cent, which in April a decrease of 13 per cent.

It will be seen, therefore, that while the May figures do not represent a particularly large increase in the volume of immediate building prospects, they are of value as a possible forerunner of summer activities comparable with the prosperous years of the immediate past.

It is to be borne in mind that these figures are an index of pending conditions. While other building data has to do with the volume of construction, either current or past, these records of building permits, especially when they embrace as they do every community in the United States, serve the purpose of an unerring national barometer. At this time, when expert opinion varies as to the business outlook and when many lines are marking time, it is a happy circumstance that the building industry gives promise of sustained or perhaps slightly increased activities.



Construction of Airplane Hangars

"AIRPLANE Hangar Construction," is the title of a publication just issued by the National Lumber Manufacturers' Association in response to a widespread demand for detailed information on the establishment of airports.

Prepared by the engineering department of that association with a view to meeting the need for advice and direction in the construction of hangars at costs which will not unduly handicap the development of air fields, the publication summarizes the important considerations governing airport establishment and the structural and service requirements for hangars. Complete working drawings, bills of materials and estimated costs are given for four types of hangars, ranging from the single plane size to the large municipal type hangar.

The progress and prospects of aviation in the United States and suggestions for hangar location and construction are discussed in a general way, while other related prob-

lems, such as doors, heating plants, fuel economy, roof trusses, roofing materials and drainage, are discussed in detail.

The publication clearly demonstrates that modern hangars are available for all municipalities at costs considerably below those paid by the larger pioneering cities in airport development. In the course of preparation of the publication, the practice of numerous air fields was canvassed and the opinion of army and other officials experienced in airport operation was obtained.

Copies of the bulletin are available upon application to the National Lumber Manufacturers' Association, Transportation Bldg., Washington, D. C.



Grade-Marking Aids Financing

SPEAKING before the recent annual meeting of the National Committee on Wood Utilization of the Department of Commerce, William S. Quinter, Washington banker, outlined how the home builder can have a better home at less cost by following some of the economy recommendations of the committee.

He also spoke, with the authority of his position as president of the District Building and Loan Association, on the advantages to the owner which the adoption of the recommendations would be in financing his home. He stated that the use of grade-marked lumber, alone, would justify a building association to make a larger loan on a home because this system of marking each piece of lumber with a symbol denoting its quality gives assurance of good construction material.

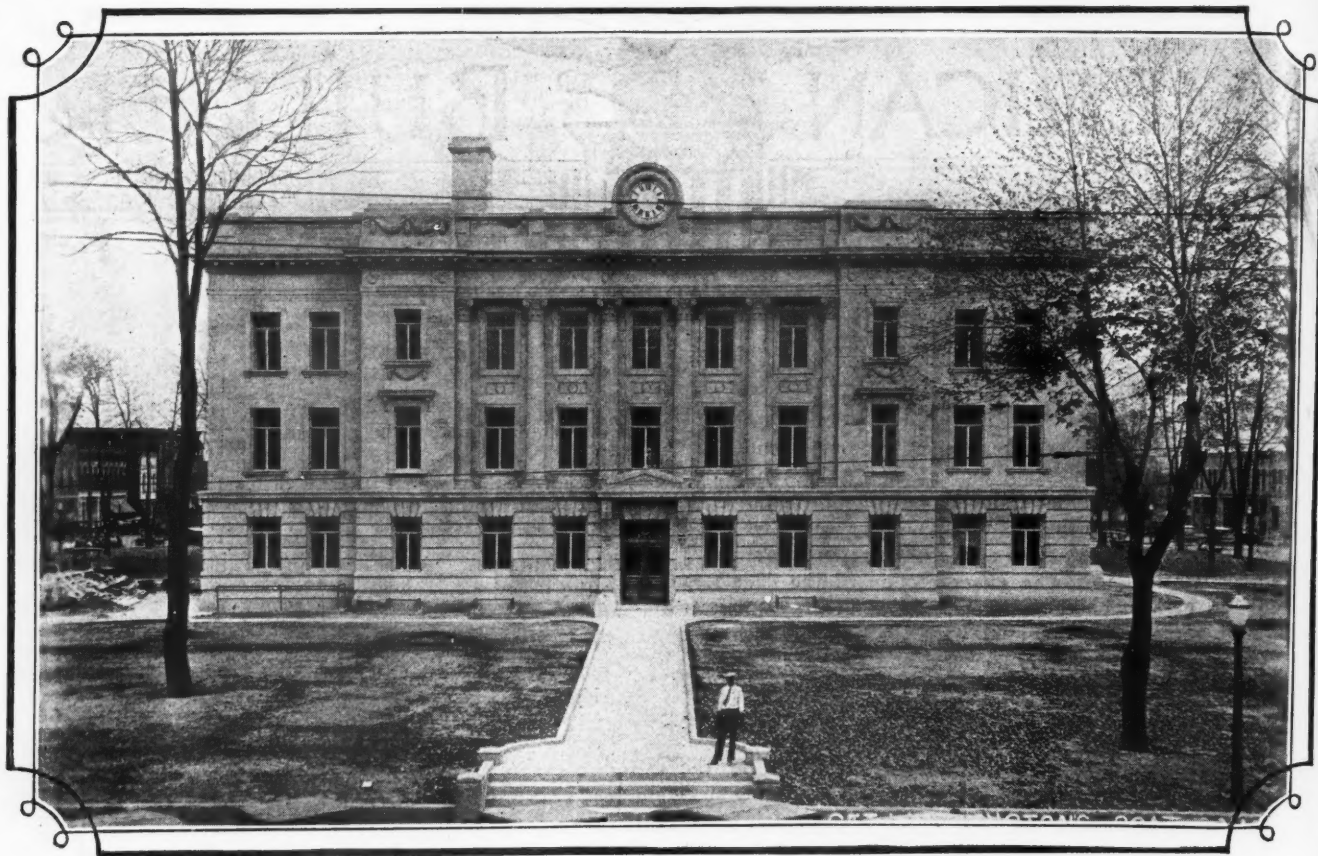
"To my mind," he went on to say, "the biggest and most important work yet undertaken by it (the committee) is the movement for grade-marking. While the appraisers for building and loan associations are usually men who have had experience in both the building and selling of homes, they are not lumbermen or even builders, and grade-marks would be of very great assistance to them, giving them the assurance that the grade of material called for by the specifications was actually going into the construction of the home. I am sure that in my own case, when I have occasion to inspect a job for the purpose of making an advance on loan, grade-marks would be of great assistance."



Some Motor Travel Figures

EACH motorist, during 1927, used an average of 550.9 gallons of gasoline and traveled an average of 7,437 miles, according to figures announced by the national headquarters of the American Motorists' Association. These averages are based on a total gasoline consumption in the United States amounting to 11,563,490,000 gallons, an increase of 12.4 per cent over that of 1926, and a net registration of motor vehicles, as of July 1, 1927, of 20,991,333. The mileage traveled is based on an average of 13.5 miles per gallon of gasoline.

Using these figures, the association places the total mileage for 1927 at 1,561,071,150,000 miles.



... How We Saved Time and Cut Costs in Building the Sullivan County Court House

By M. F. Stephens

Sup't for Walter R. Heath

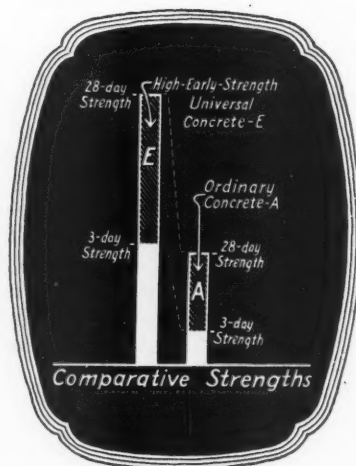
General Contractor, Greencastle, Ind.

"How can we hurry completion of our new court house and at the same time secure unusually strong construction?" asked the officials of Sullivan County, Indiana.

We answered both of their questions.

Concrete footings, basement walls, floors, steps, walks and driveways were ready for service 3 days after placing. This speeded up other parts of the job and as a result the court house was ready for use much earlier than otherwise would have been possible.

In furnishing speed we also provided



permanently better and stronger concrete—and at the same time, because of our ability to strip and re-use forms in 72 hours, we effected substantial savings in form costs.

To secure these results we used **High-Early-Strength Universal Concrete** made with **usual materials, usual labor, usual equipment and usual Universal cement**—the same kind that we use for ordinary construction—all applied according to the definite methods* outlined by the Universal company.

*Information on these methods will be mailed promptly on receipt of the accompanying coupon.

Universal Portland Cement Co., 208 South La Salle Street, Chicago

Without obligation, send me detailed information on methods for securing strong concrete in 3 days with the usual materials, usual equipment, usual labor and usual Universal cement.

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EVERYBODY'S BUSINESS



New Ways for Old

By FLOYD W. PARSONS

WHAT are you doing, and how? No question is more important at the present time. The keenness of business competition today is making the interrogation mark the most widely used form of punctuation. Modern executives are out to know. They want to be shown, and insist on taking nothing for granted.

Success in practically all lines of activity right now is as much a matter of mental attitude as of mental capacity. Doubt is now a prime asset. The fellow who wins is the one who is always searching for a new and better way.

Where would the automobile business be today if the leaders in that industry had lacked the courage to break with precedent? For generations a fundamental principle of business was to buy cheap and sell for all that the traffic would bear. Then came Henry Ford with a new idea. Instead of cost determining the selling price, the selling price should determine the cost. If it had not been for this reversal of an established policy, the manufacturing cost would still be the primary consideration and the use of motor cars would not be half what it is. Prices would not have been brought down within the reach of the masses.

What I want to bring out is the essential need for a viewpoint which holds to the notion that nothing is impossible. Whatever we are doing might be done better. Right under our noses are new materials, perhaps synthetic ones, that can be utilized to cut costs without reducing quality.

Thousands of sweating Egyptians devoted years to the construction of the pyramids. Even more thousands of Romans gave all of their time for decades to the building of rock highways. Now we take a magic powder finer than flour, mix it with a little sand and rock and produce a substance that would enable a mere handful of modern workmen to build 30 or 40 pyramids as large as the famous Cheops in a single year.

Our Bureau of Standards at Washington has found that all atoms, when excited, emit light of certain wave lengths. By this means we can identify any kind of atom with as much ease as we can a radio station by

the length of the wave it broadcasts. This line of research provided data that led to the discovery of the new metal hahnium. Most amazing is the fact that hahnium is more plentiful in nature than either tin or lead and two billion times more abundant than gold, and this disclosure came when many had concluded that there was nothing new for science to uncover in the field of useful elements.

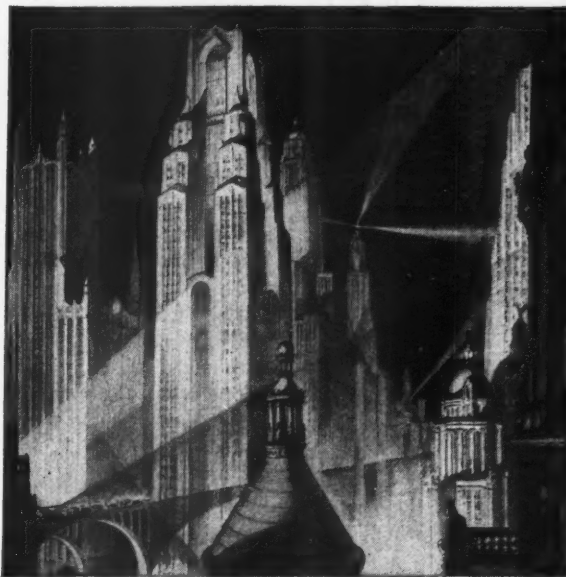
There could be no better example to indicate the necessity of scrutinizing all current practices, regardless of their seeming importance, than the matter of the arrangement of engine-whistle toots on railroads. Originally the signal was two long blasts, followed by two short ones as the locomotive approached the crossing. Someone questioned the practice of making the most noise when the engine was farthest away. The result in several places has been a new signal in which the short toots are sounded first, while the longest and loudest warning is given just before the locomotive reaches the crossing. The first railroad that made this change had 28 fewer accidents at crossings last year, which reduction was attributed largely to the new arrangement of blasts.

It was evident years ago that the roller bearing had done more than probably anything else to make the automobile possible. After years of apparent neglect of a promising opportunity, our great rail transportation systems finally

discovered that it requires only one-seventh the tractive effort to start a roller-bearing train as one equipped with friction bearings. One carrier that has commenced to operate ball-bearing trains has found already that a locomotive can start 30 such cars with as little effort as it can a 12-car train of the ordinary type.

The new system eliminates jolt and jar in starting and stopping, and does away almost entirely with the pitching and rolling that heretofore developed when the trains traveled at high speed. So easy of operation are the new roller-bearing cars that a heavy steel Pullman of this type can be pushed by two men along a level track.

Several street railway companies have also taken their cue from the automobile manufacturers and have come to the use



In the Day That's Coming.

of rubber pads to insulate the car bodies from the trucks, thereby reducing the transmission of noises from gears and wheels.

Accidents at railroad crossings have been a source of constant worry to the rail system. Now comes an arrangement made up of two sets of rollers installed in the highway near the approach to the tracks. These rollers revolve in only one direction, and when an automobile strikes them in the face of an approaching train, they start to turn, thereby preventing the car from going forward. When the gates are up, a motor car proceed over the rollers in normal fashion. It is only on the coming of a train that an automatic switch unlocks the rollers, permitting them to revolve.

A new plan of radio communication enables the engineer and conductor on a long freight train to talk with each other at will, though separated by more than a mile of intervening freight cars. The mere pushing of a button in the caboose sounds a whistle over the engineer's head. All that is then necessary to establish communication is for the man operating the engine to pick up a hand telephone and start to talk. This plan will speed up railway operations and allow the trainmen to be in constant touch with the signal towers along the line.

Instead of the old-time prospector who did a lot of guessing and caused his employers to waste money in drilling dry holes, the oil company now sends forth a trained engineer equipped with delicate devices that provide data on the relation of the pull of the earth to the density of material under its crust. A specific variation in density and gravity values will very often provide reliable evidence of petroleum beneath the surface.

When the necessity is great enough, we find few obstacles too high to surmount. Not many would have believed that lightning could be chained, and yet this feat has been accomplished. Huge storage tanks filled with a million or more barrels of oil are safeguarded against lightning by a system that actually prevents the lightning from happening.

The ordinary rod or tower that has been in common use operates on the theory of attracting the lightning discharges which would have struck the oil or other object in the immediate vicinity. The new system operates by gathering into itself practically all of the ground charges and then returning them to the threatening thunder cloud by ionic discharge in such a way that no destructive lightning can take place over the protected area. The electrical discharge in the heavens is changed from an "impulsive flash" to merely an electric leakage of almost imperceptible intensity.

Astonishing devices are now doing wonderful service in every branch of industry. A great deal has been written about the wide uses of the photo-electric cell which is so sensitive that it transforms changes in light intensity into electric fluctuations. The management of one big Michigan paper mill placed one of these cells beneath the roll of paper that travels continuously through the factory. Any tendency of the moving paper to get too thick or too thin changes the amount of light transmitted, and this sets the cell in operation at once, bringing about an immediate automatic adjustment of the machinery.

No less wonderful is another apparatus which will stop factory machinery in answer to a cry of "Help." Wireless waves are the medium employed in this system to provide "audible control." The microphone that forms a part of the equipment is so selective that it will disregard ordinary conversations and react only to the key words that have been chosen. This points to a time when doors will open and trains stop in quick response to a specific command.

Science is benefiting life and industry in so many thousands of ways that one hardly knows where to begin in attempting to tell even a part of the story. An Englishman

has succeeded in making "one-way windows" by placing an extremely thin film of gold over one side of the glass. A person looking out through glass of this kind finds that although all objects have a greenish tint, each one is plainly visible. But to anyone on the outside who tries to look in through these windows, all that he can see is an opaque burnished panel.

In an effort to produce a street-paving material that will reduce dust, noise and the danger of skidding, one experiment has been undertaken with terra-cotta blocks having a rubber facing and laid and cemented together in quite the same way as are other varieties of paving blocks. It will not be surprising to see entire streets of rubber when synthetic methods of producing this material get well under way.

Traffic engineers are commencing to take into consideration the fact that a great many motor drivers are color-blind. One remedial plan handles this situation by having the traffic signs of different shapes. The "go" signal continues to be a round green sign. The "stop" signal remains red, but it is square instead of round, and it contains two crossed black lines, suggesting a street intersection to the color-blind driver. A third signal that might be called a "warning" sign is yellowish in color and diamond-shaped. Signal lights of these distinct shapes, of course, do not in any way confuse drivers having perfect color sense.

Interesting and up-to-date is the police signal system of one large Canadian city where the chief can sit at his desk and call any patrolman to a phone by flashing lights that are located on top of all the poles of the officer's beat. In an emergency it is possible to flash a general call that will summon all policemen on duty to the nearest telephone boxes.

Many manufacturing establishments not content with merely eliminating dangerous dust have gone further and are converting odors into dollars and cents. One chemical company now traps the smells going up the chimney, mixes them with water, and then by a process of distillation recovers as much as 80 per cent of the solvents used in the chemical formula employed.

New uses are being found for almost everything. Dynamite is being utilized to tame rivers and save cities. Every second, somewhere in the United States, 20 pounds of explosives are fired. Whalers use a "killing lance" with a small explosive in its tip. Many of the sharks that supply us with leather are baited with raw meat and then brought to the surface with dynamite. Mosquito-infested sections are made livable by using this same agent to dig miles of ditches. Explosives are used to loosen nuts and bolts, kill prairie dogs, quench fires, furnish smoke screens, and supply the rock salt that helps freeze our ice cream.

Fish farming is becoming a really important business. The ponds must be cleared at least once a year of all predatory fish that may have found their way into the water. In the past it was necessary to drain the ponds and pick out the fish not wanted. Now one clever fellow lays a bare copper cable lengthwise along the bottom of the pond, and another cable is held on the surface with floats. Current is then sent through both cables, which are drawn from one side of the pond to the other. Fish within a distance of 16 feet of either cable become unconscious when the current is turned on and float to the surface. Men in boats then pick up the undesirable trespassers, and as soon as this job is finished the current is turned off and the remaining fishes regain consciousness immediately.

Well may we wonder what tomorrow will disclose. Our farms are being factoryized and mass production employed. Science ignores political cure-alls and points out that the salvation of agriculture lies in converting surplus production into useful commodities. A ton of

(Continued to page 100)

Smoothing Out the Spring and Fall Peaks

By GEORGE H. EMANUEL

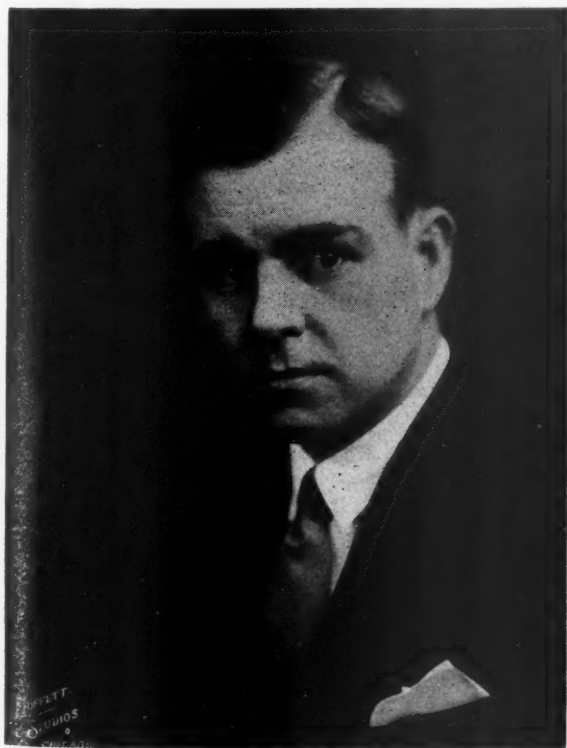
SELDOM does a scientist who discovers a disease run upon its cure, and it is not frequent for a boy with a sling shot to kill the proverbial two birds with one stone, but the Chicago Homes Economic Council is doing that very thing in its territory and to all appearances the single stone is working havoc with a great flock of buzzards which have been preying on the business life of the great city.

The Council was organized last February to combat the city's quaint custom of dating all leases either May 1st or October 1st. This custom of forty years' standing and of unknown origin, piled the work of a year for real estate firms, decorators, movers, etc., in a month each spring and fall.

It was looked upon by its initiators as primarily a real estate movement. A campaign was launched to make every month a renting season instead of confining the activities to April and September. Investigation soon developed that the building industry was enthralled in the meshes of the same obsolete system. Property owners and contractors were so used to their fetters that they had given them but slight consideration.

Studies made by Raymond C. Booth, secretary of the council, revealed that there were a series of peaks in the building industry which owed their origin to the habit of dating leases either May 1st or October 1st. Here is the way they worked.

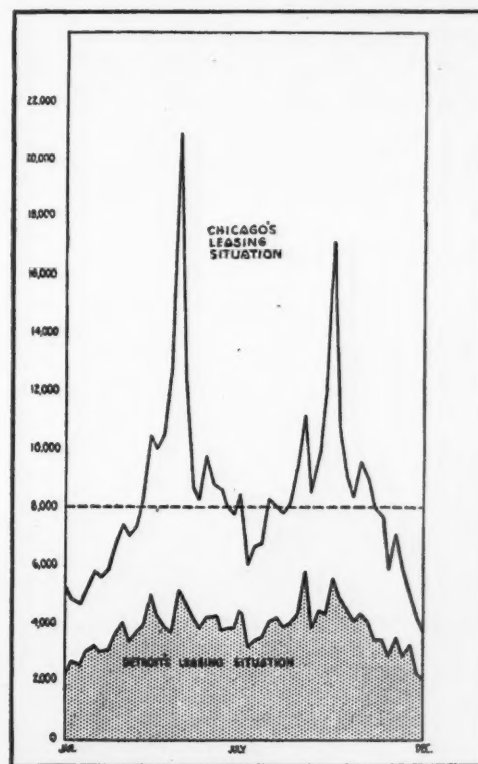
In a city such as Chicago, where property values are high and the cost of holding vacant is burdensome, prospective builders held off buying the ground until the last day when they could get a building ready for the next renting season. This made two inordinately active markets for vacant twice a year and boosted prices.



Oliver S. Turner, Chairman Chicago Homes Economic Council.

The ground having been purchased, the next problem was the architect. If he specialized in apartment houses it was safe to assume he had more work than he could do after six months of inactivity. It is only natural to assume that an architect with all the work he could handle would not be able to give the attention he would like to give to every job.

The difficulty of getting an architect who could devote the requisite time to an apartment house job during the peak season was only an initial step. This was followed by peaks for contractors and sub-contractors. When the excavators were working the plasterers were easy to get,



The comparative May 1 and October 1 renting peaks in Chicago and Detroit.

but when the bathroom fixtures were being installed the bricklayers were approaching a quiet season.

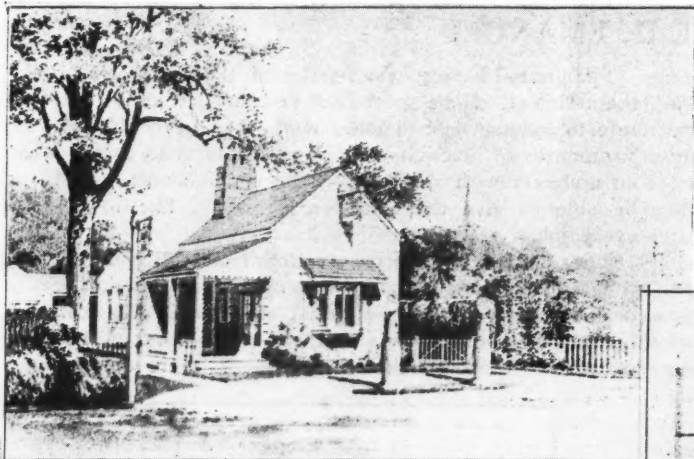
Business peaks are an old story and those in the building industry have attracted the attention of Secretary of Commerce Hoover. A commission appointed by him investigated the seasonal practices in the industry a few years ago and recommended year round construction.

From the outset of its campaign to relieve the renting, decorating and moving peaks in Chicago, the department of commerce displayed a lively interest in the movement. Chicago builders took an active interest and many of them are supporting the council financially.

At the outset the council tackled the problem full on and waged war against the leases dated May 1st of this year. Property owners were circularized and real estate agents were asked to offer tenants leases for 13, 14 or 15 months which would expire the last of May, June or July of 1929. Moving men who had been in the habit of crowding a year's work into a couple of months, took an active

(Continued to page 123)

Winning Designs in the Wayside

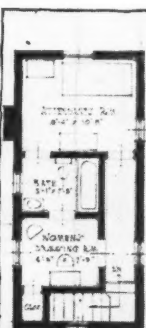
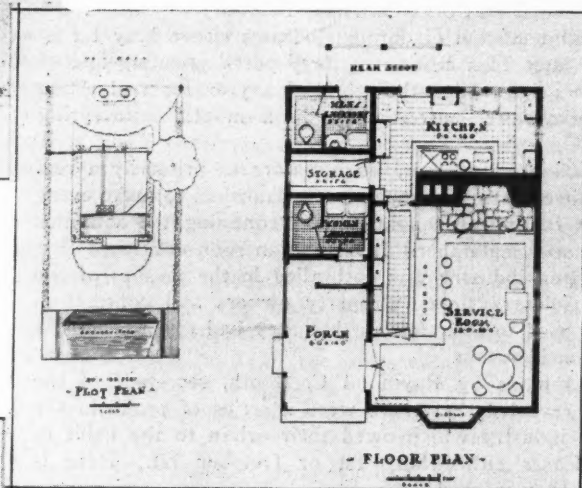


First prize (above) and second prize (below) winning designs for a refreshment-stand and gas station group in the Second Wayside Refreshment-Stand Competition initiated by Mrs. John D. Rockefeller, Jr., through the Art Center of New York and the American Civic Association of Washington, D. C. These awards were made to Henry Ives Cobb, Jr., of New York City, and Malcolm P. C. Cameron, of New York City, respectively.

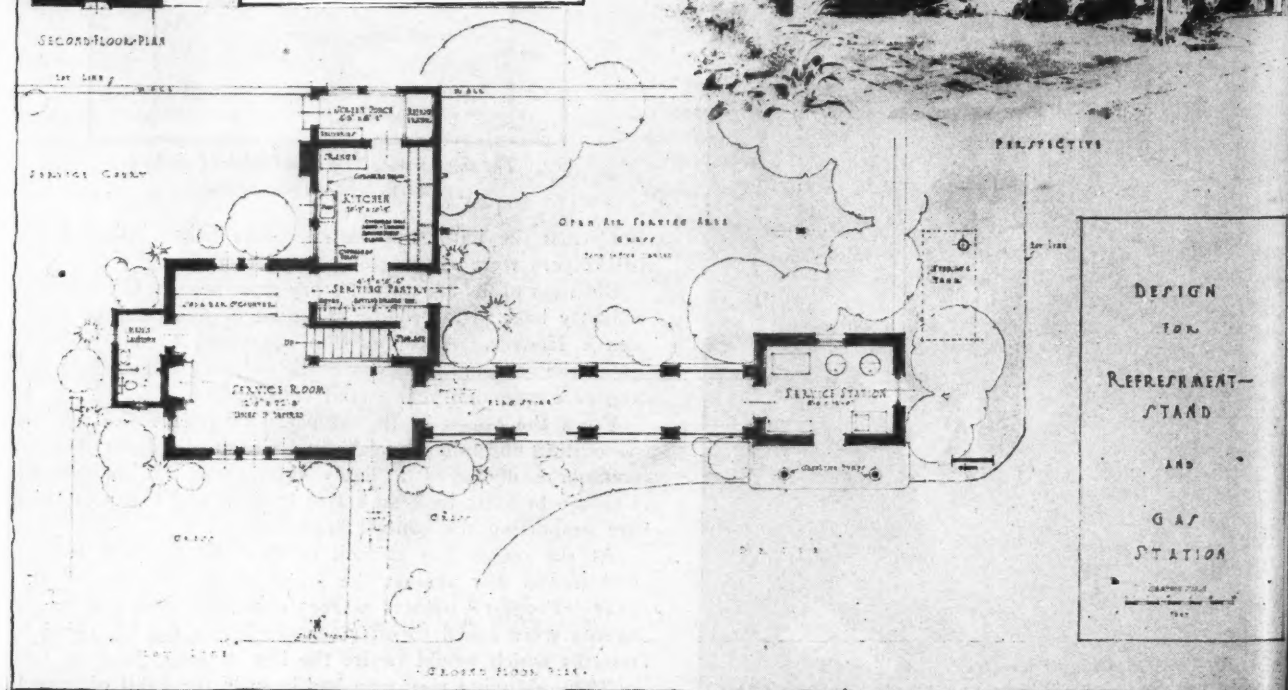
Color and Materials

The First Prize Building to left is intended for a New England setting.

The general color scheme, white with gray green roof and apple green trim. Materials: Roof, cedar shingles; siding, red cedar; frame, spruce; fence, spruce; porch rail, spruce; fireplace and chimney, local stone; floor, oak, pine, spruce; exterior trim, white wood. Interior, sheathed with cypress planks and battens.



NOTES — The exterior walls may be either hollow tile or wood frame. The exterior surface to be white stucco. All interior walls to be finished in light gray. Rough surface plaster. Roof to be Spanish tile in irregular courses. Ceiling in main room to be open timber. The site would presumably be in the southwest.



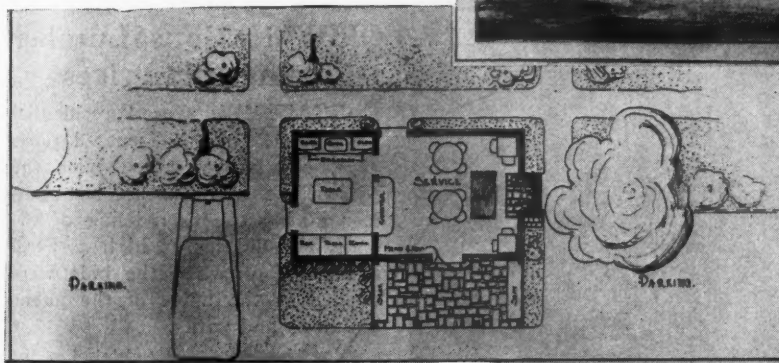
Refreshment-Stand Competition

NOTES—The exterior stucco is to be a light gray. Chimney built of a dark over-burned brick. Rough siding on gable to be stained a silver gray. Timbers to be rough and stained brown, then rubbed with white lead. Roof to be cedar shingles laid unevenly. Porch floor to be of random flags.

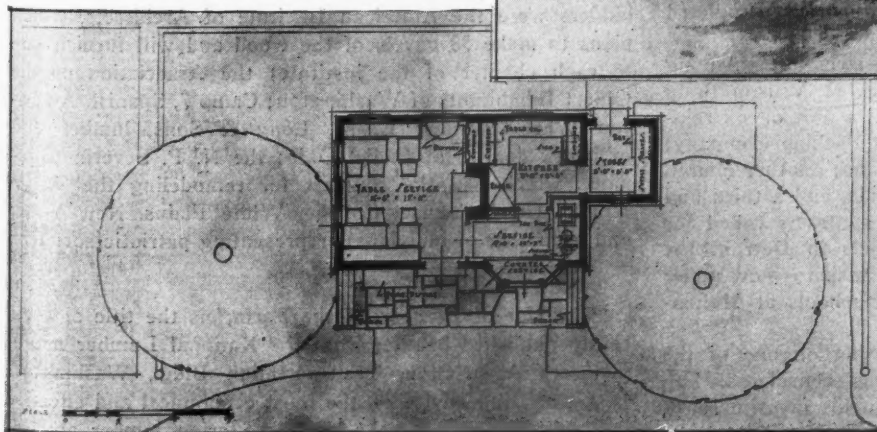
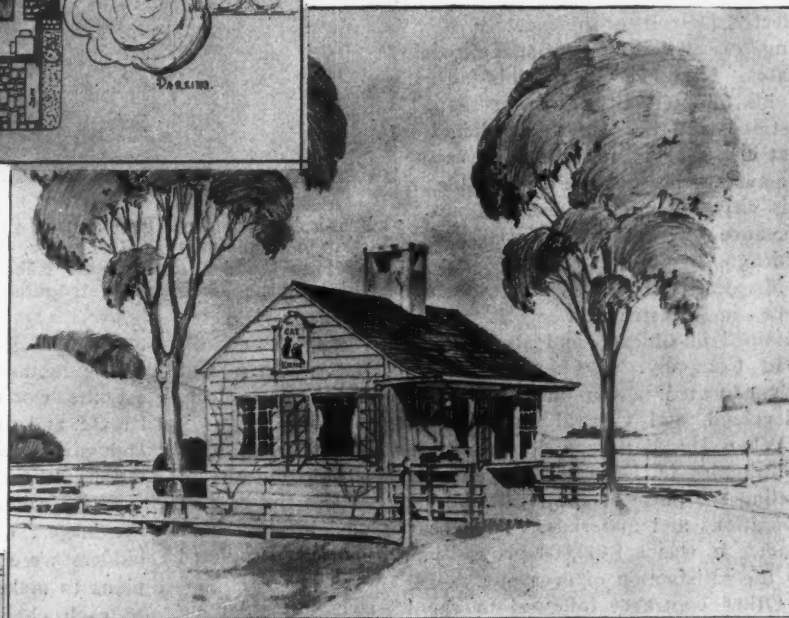
Interior walls to be of plaster board painted a sand color. Roof rafters to be left exposed and stained a golden brown. Floor to be of random width oak or pine stained brown. Fireplace to be of local stone uncut. Kitchen walls and fixtures painted a light gray striped with red. Light green linoleum on the floor.



Second prize for a refreshment stand group was awarded to Franklin Scott, of New York City, for the design shown below.



First prize for a refreshment-stand group in the Second Wayside Refreshment-Stand Competition was awarded to William E. Frenaye, Jr., of New York City, for the design shown above.



Exterior

Front wall vertical boards; other walls wide siding, all painted white. Roof shingles, stained dark. Chimney brick with cast concrete cap, both white-washed.

Interior

Fireplace wall of stained fine boards. Other walls plaster. Rafters exposed and stained. Random width flooring.

The Remarkable Record Made by a Detroit Builder

A ROMANCE of the business world, possible, perhaps, only in Detroit, the city that for rapid rise to fame and fortune outrivals any romance of fiction, has just been called to attention through the issuance of an insurance policy for \$1,000,000.

It was just seven years ago that a young man of 25 came to Detroit. His worldly possessions included a college education, a degree of civil engineer, a rolltop desk, badly battered, and enough cash to rent a corner of a dingy office. Today, at 32, he is president of a construction company that has built millions of dollars worth of buildings, and has just taken out a policy on his life for \$1,000,000, paying out nearly \$20,000 as a premium for the first year.

The hero of this business romance is Frank Rolland Patterson. He is president of the F. R. Patterson Construction Company, 2631 Woodward Avenue, Detroit, which has erected some of the finest public and private buildings in Michigan.

When Frank R. Patterson decided to go into the construction business for himself eight years ago, he selected Detroit as the most promising of all cities in the United States. Now he feels that his faith in his adopted city is more than justified, and he recently predicted that in a shorter space of time than the average person believes possible, this city will rank in size and importance with New York and Chicago.

Mr. Patterson's previous experience in construction work was obtained in Chicago and also with the Pennsylvania Railroad Company. He was born at Atwater, Ohio, and was educated in the public schools and at Case College, Cleveland, and Central Institute, Cleveland.

When Mr. Patterson decided to compete with the other contractors in Detroit, he spent his first few months in feeling the pulse of the local labor market and the cost of operations and materials. Then he obtained his first contract. It was a \$400,000 proposition, which he completed to the satisfaction of everyone.

Other contracts followed in rapid succession. Among them were included buildings for the C. H. Wilson Body Company; a high school at Wyandotte; a unit of six reinforced concrete buildings for the Detroit Packing Company; a church of Gothic design at River Rouge; another church of Romanesque design on the North Side, and a third and fourth church out of the city. Other contracts called for the erection of grades and high schools in Detroit, the Genesee County Court House at Flint, which is now under construction; a hotel at St. Clair, and schools at Melvindale, Mich.

At present Mr. Patterson is estimating on one of the largest propositions his firm ever has considered, but, despite that, he finds time to indulge in his favorite sport, golf, with a certain degree of regularity. He also admits that he is a lover of music, even of the sort that the average business man is apt to classify as "high-brow."

Mr. Patterson believes that the construction and contracting field offers unlimited opportunity to young men who will start out with the determination to stick to it and who are willing to strive through lean years that almost invariably precede the success that comes in the end. He also is convinced that the growth of Detroit will be extremely rapid, but decries any talk of a sudden boom of

Detroit, either in values or abnormal construction. He pointed out, however that in its rapid increase in population and the spread of the business district, that many valuable pieces of property are now occupied by buildings that are but little better than shacks, and that they must give way in the near future to income-producing properties.



Old White House Lumber Brings Big Prices

BECAUSE it was "presidential timber," much discussed these days, old lumber taken from the roof of the White House last summer during the remodeling of the mansion, sold for as high as \$4.00 a lineal foot when the bids were opened at the office of the public buildings and parks.

The historic wood, which has literally held the roof over the heads of 26 presidents of the United States during the last 112 years, will be perpetuated in the form of gavels, wall plaques, chairs and all sorts of souvenirs by the patriotic, historic and other organizations which bid for it.

The lumber, rivaling in historic and sentimental interest the wood taken from "Old Ironsides," the famous frigate, and now being made into walking sticks, book ends and gavels, is longleaf Virginia pine, all in excellent condition although in use over a century.

The National Lumber Manufacturers' Association took the largest quantity of the famous wood. Among other bidders were the American Institute of Architects, which plans to make 58 gavels of the wood and will furnish one to each chapter of the institute; the Association of the Oldest Inhabitants of Washington; Camp 7, Spanish American War Veterans; E. M. Long & Sons, lumber and millwork dealers of Cadiz, Ohio; the N. P. Severin Company, which had the contract for remodeling the White House; Good Counsel College, White Plains, New York; and a number of individuals representing patriotic societies.

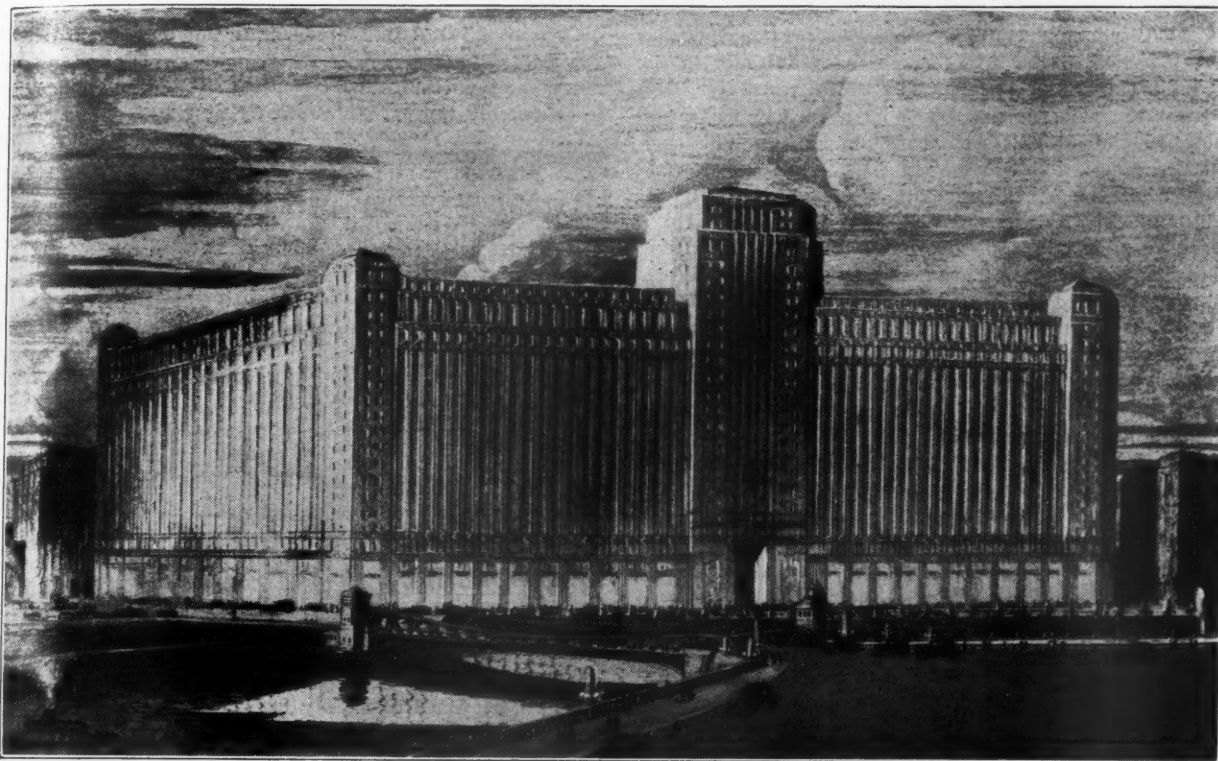


"The Use of Lumber on the Farm," is the title of a recently published booklet from the National Lumber manufacturers Association, Transportation Bldg., Washington, D. C., offering advice on the most economical and effective methods of using, purchasing and storing lumber and including a list of many sources of information on farm building plans.



Frank R. Patterson, President of the F. R. Patterson Construction Company, Detroit, Who Has Made a Remarkable Record as a Builder in the Michigan Metropolis.

The Chicago Merchandise Mart a Gigantic Building Project



The Chicago Merchandise Mart as It Will Appear When Completed. This perspective prepared by the architects, Graham, Anderson, Probst & White, presents what will be the largest business building in the world.

ANNOUNCEMENT was made recently of one of the greatest and most interesting of modern building projects—the construction, in Chicago, of a gigantic Merchandise Mart to be twice the size of the largest business building in the world. This massive edifice, whose architecture will typify the great American building of today, will be two city blocks in length, 18 to 23 stories high, and will represent an investment of \$30,000,000. Construction will begin immediately.

The Mart will have a total floor space of about 4,000,000 square feet, as compared with slightly less than 2,000,000 square feet, which is the floor area of the Chicago Furniture Mart—the next largest building. Each of the eighteen main floors will have an area of over 200,000 square feet. The structure will be topped by a five story tower.

This project includes the largest single development of air rights so far scheduled. The property, except for the 553 caissons extending to bed-rock, begins 23 feet above "datum." The site is that of the former passenger station of the Chicago and Northwestern Railway. The building will extend 724 feet on Kinzie street, 577 feet on the Chicago river front and 324 feet on Wells street, with a diagonal frontage facing Orleans and Franklin.

This massive structure will be one of the most imposing masses in the country, according to the architects, Graham, Anderson, Probst & White, and will be set back from the river about eighty feet. A drive, which will be the start of a North Bank Boulevard, will run between the river and the facade of the building. A river wall of stone, similar to the Wacker Drive walls, will make a stylobate for the whole.

The lower three stories will form a base of stone from which the main structure rises fifteen additional stories, and

a broad tower of five stories will mark the center of the facade. At the base of the tower will be the main entrance, simple and impressive, flanked by two great bas-reliefs of a heroic scale. These sculptures will be compositions representing the romance of industry and merchandising, and will be of sufficient strength to be admired from across the river. Between the broad pilasters on the facades there will be large show windows for display. In the entire structure there will be a total of 5,500 glass windows.

The general shape of the lot is a rhomboid and the angles will be turned by having the four street fronts terminate in octagonal towers. These towers, as well as the central tower, also octagonal, will be roofed with flat stone roofs, giving a feeling of strength and stability and the three upper stories will be terraced back in steps as they butt into the towers. Entrances on Franklin and Wells streets will lead to the main lobby on the center of the river front. The lobby will open into the many activities and facilities which will greet buyers.

The masonry exterior partly stone will be carried out in a soft gray material with a conservative use of color, and the pier and window relation has been studied to convey to the quick glance of the passerby an appreciation of the colossal character of the project.

Comparisons of the cubage of the largest buildings in the world shows the Merchandise Mart will be more than twice the size of the largest business building ever constructed. Here are the figures in cubic feet:

- 1—The Merchandise Mart, 53,000,000.
- 2—Chicago Furniture Mart, 25,370,000.
- 3—Equitable Building, New York City, 24,000,000.

(Continued to page 100)

Curtis Institute Concert Hall A Problem in Acoustics

HORACE WELLS SELLERS, Architect

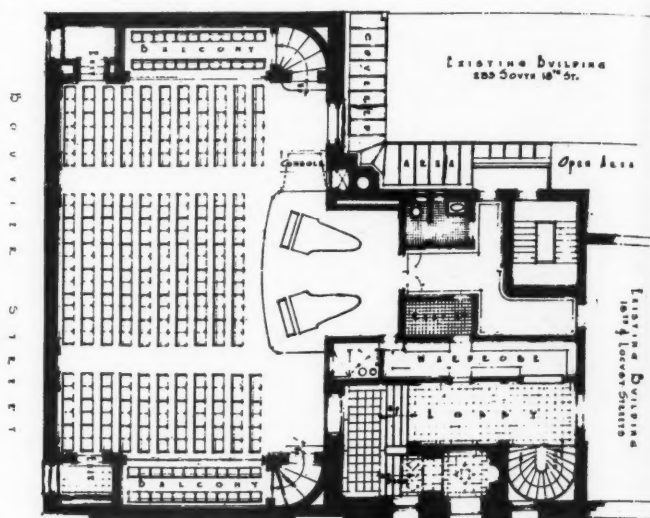
THE problem of concert hall design presents peculiar difficulties to the architect that are not met in the requirements of ordinary places of assembly. Not only must the acoustic properties be as nearly perfect as possible, but outside noises must be minimized or wholly excluded.

Convenience of access and exits are essential to conform to municipal fire regulations; yet adequate space must be reserved for late-comers to avoid disturbance while a musical number is being performed. The building must be adequately heated; yet the problem of ventilation is of even greater importance where so many people are gathered. Last, but not least, the building must fulfill an aesthetic ideal in harmony with the artistic purpose which it serves.

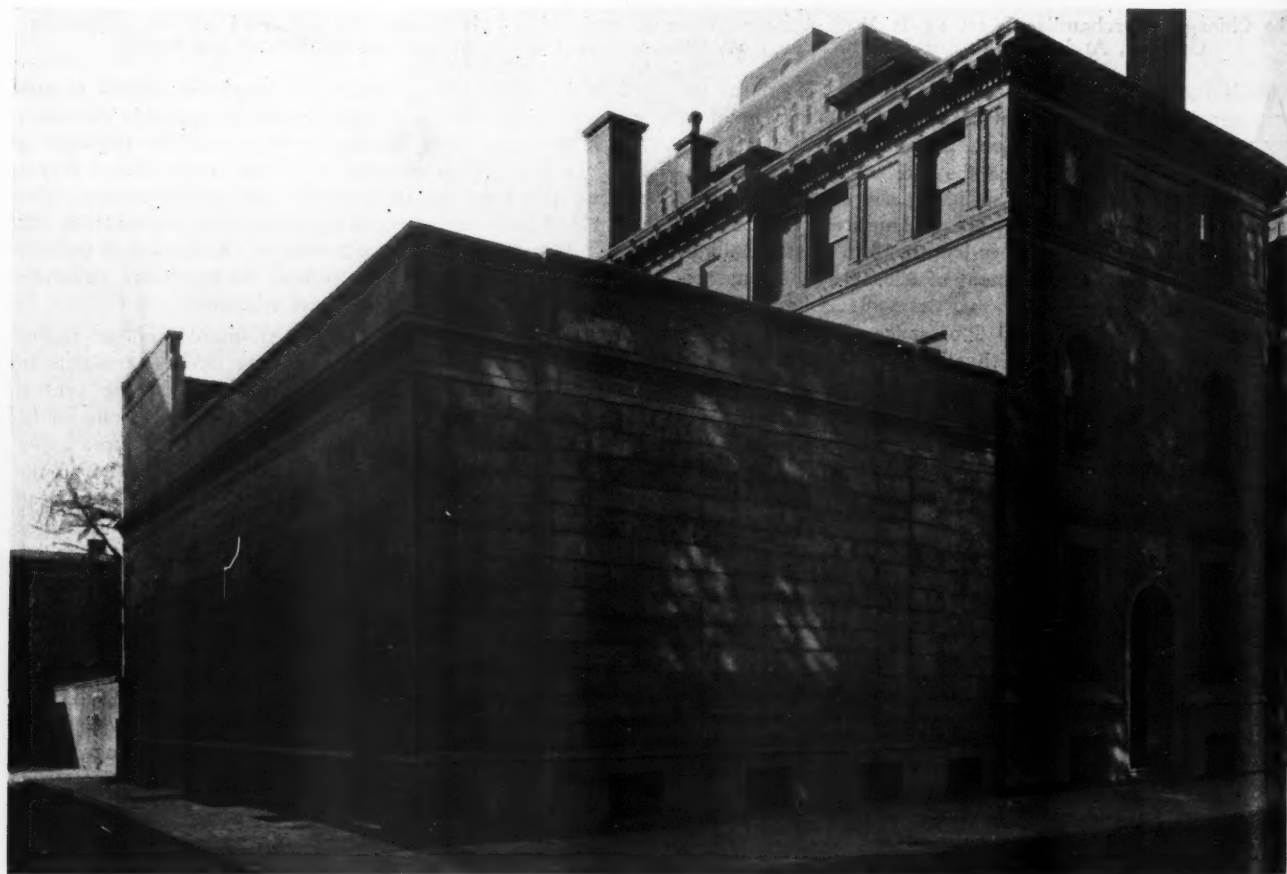
These difficulties were multiplied in the erection of the new concert hall of the Curtis Institute of Music in Philadelphia, which was opened to the public last December. The Curtis Institute is an endowed school of music, founded by Mrs. Edward Bok, wife of the publicist and daughter of Cyrus H. K. Curtis.

Three mansions in Rittenhouse Square, formerly the residences of well-known Philadelphia families, form the group of buildings which have been adapted to the needs of the Institute. In the rear of the properties lay a plot of ground 45 by 70 feet, upon which it was decided a year ago to erect the concert hall.

Certain physical difficulties immediately became evident. The site was insufficient to permit of widespread ante-rooms and corridors which might isolate the auditorium from outside noises. The site is at the junction of two



This Plan Shows How the Adjoining Building of the Institute Has Been Used to Supply Entrance and Lobby Space for the New Hall.



The New Concert Hall of the Curtis Institute of Music Is Without Outside Openings Except Basement Fire Exits. Lighting and ventilation are obtained by mechanical means. This was one of the means adopted by the architect, Horace Wells Sellers, of solving the difficult acoustical problem of excluding outside noise.

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busy thoroughfares carrying heavy automobile and trolley traffic. This accentuated the problem, inasmuch as the concert hall was to be the scene of continual activity—rehearsals, lectures, practice and concerts, by day as well as evening.

The solution was entrusted to Horace Wells Sellers, F. A. I. A., who has had long experience in dealing with similar requirements. A plan was finally decided upon, to erect a building practically sound-proof, without exterior windows, doors or skylights in the auditorium, and therefore provided with artificial lighting and ventilation. Only by thus conserving every inch of available space could the building be erected at all.

The result is a structure unique in certain respects. Of steel and reinforced concrete faced with cut stone, the concert hall rises to a height of 26 feet above the sidewalk level unrelieved by ornament except an unobtrusive cornice. The facade blends inconspicuously into the adjoining building, which was once the town house of the Drexels. In its entire exterior there are no openings except the basement fire exits.

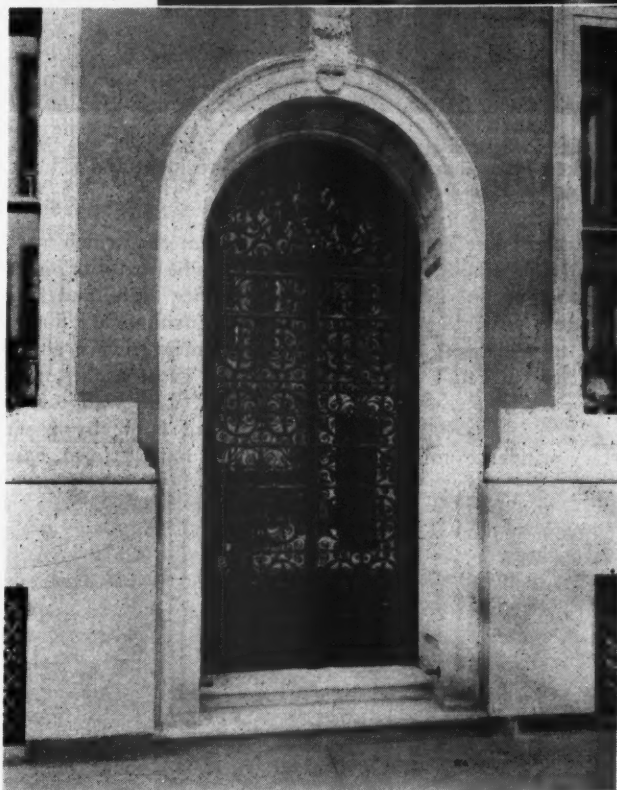
It is through the old Drexel mansion that entrance to the concert hall is gained. Here the hand of the craftsman appears in the entrance doors of wrought iron created by Samuel Yellin, the design being in harmony with the architectural treatment of the whole facade. The entrance leads into a marble vestibule enclosed by iron grille doors, thence to a foyer that gives into the auditorium.

Here beauty of treatment of a difficult subject at once be-

Double Doors of Wrought Iron, Created by Samuel Yellin, Form the Entrance of the New Concert Hall of the Curtis Institute of Music.



A Corner of the Hall Showing the Balcony. The grille work at the base, above the door and in the cornice, deftly conceals the air supply and exhaust ducts.



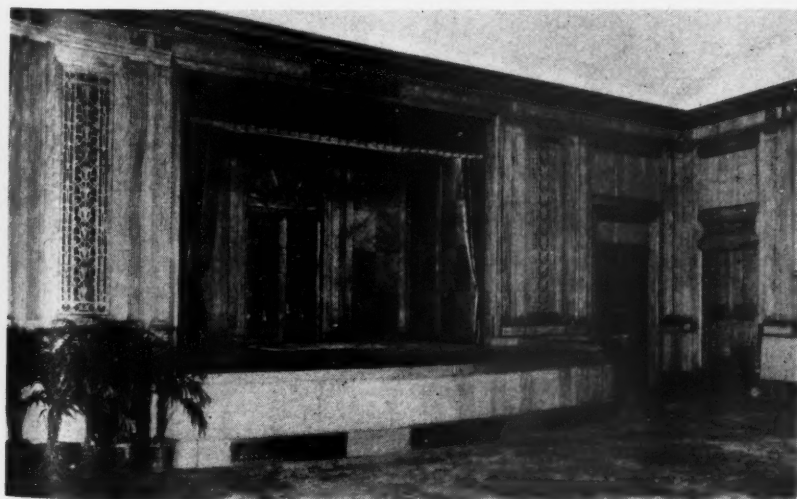
comes visible. From floor to ceiling the walls are lined with white mahogany restrained in detail and stained a neutral tint of gray. The curved ceiling of cream color gives an effect of spaciousness. Raised balconies at either end are ornamented with wrought iron railings.

The heating and ventilating problem has been deftly solved. Openings for air ducts have been fitted with carved wood and metal grilles, the mechanical equipment having been made especially complex by the requirements of a large pipe-organ which had to be installed without encroachment on the hall.

The acoustic problem demanded exceptional treatment, owing to the fact that in an auditorium of limited size, every type of performance from solo piano to full orchestra had to be accommodated. In consultation with Clifford M. Swan, acoustical engineer, Mr. Sellers arrived at an interesting solution.

All partitions were constructed of two layers of gypsum block with an air space between. Into this space were inserted two layers of deadening felt, between which was hung a sheet of galvanized metal. The sound waves, under this theory, are partly absorbed by the gypsum block, further dispersed by the deadening felt, and then are reflected back through these insulating mediums by the metal sheet and thus dissipated.

Similar acoustical treatment of the studios throughout the Institute building has eliminated to a notable extent the confusion of sounds often met with in structures devoted to the practice and teaching of music.



The Stage of the New Concert Hall. The grille work at sides and base provide ventilation. The wainscoting is of white mahogany stained gray.

The New Milwaukee Journal Plant

A BIG achievement of The Milwaukee Journal in the erection of its new home at Fourth and State streets, Milwaukee, is in harmonizing the conflicting demands of utility and beauty and obtaining a high percentage of results in both. In planning the building, The Journal management frankly recognized that it was engaged in a manufacturing enterprise, and that any expenditures for a new structure could be justified from a business standpoint only if greater efficiency in operation were attained.

The plans, which were five years in preparation, gave first consideration to problems of straight line sequence of operations, both in the plant and in the offices; substitution of machine for hand labor wherever possible; maximum light and ventilation; and greatest possible accommodations for the public. Its location, in a district still undeveloped and three blocks from the present retail center of the city, was chosen because it gave ready accessibility on all sides.

The lot was located on an artery which promised, with



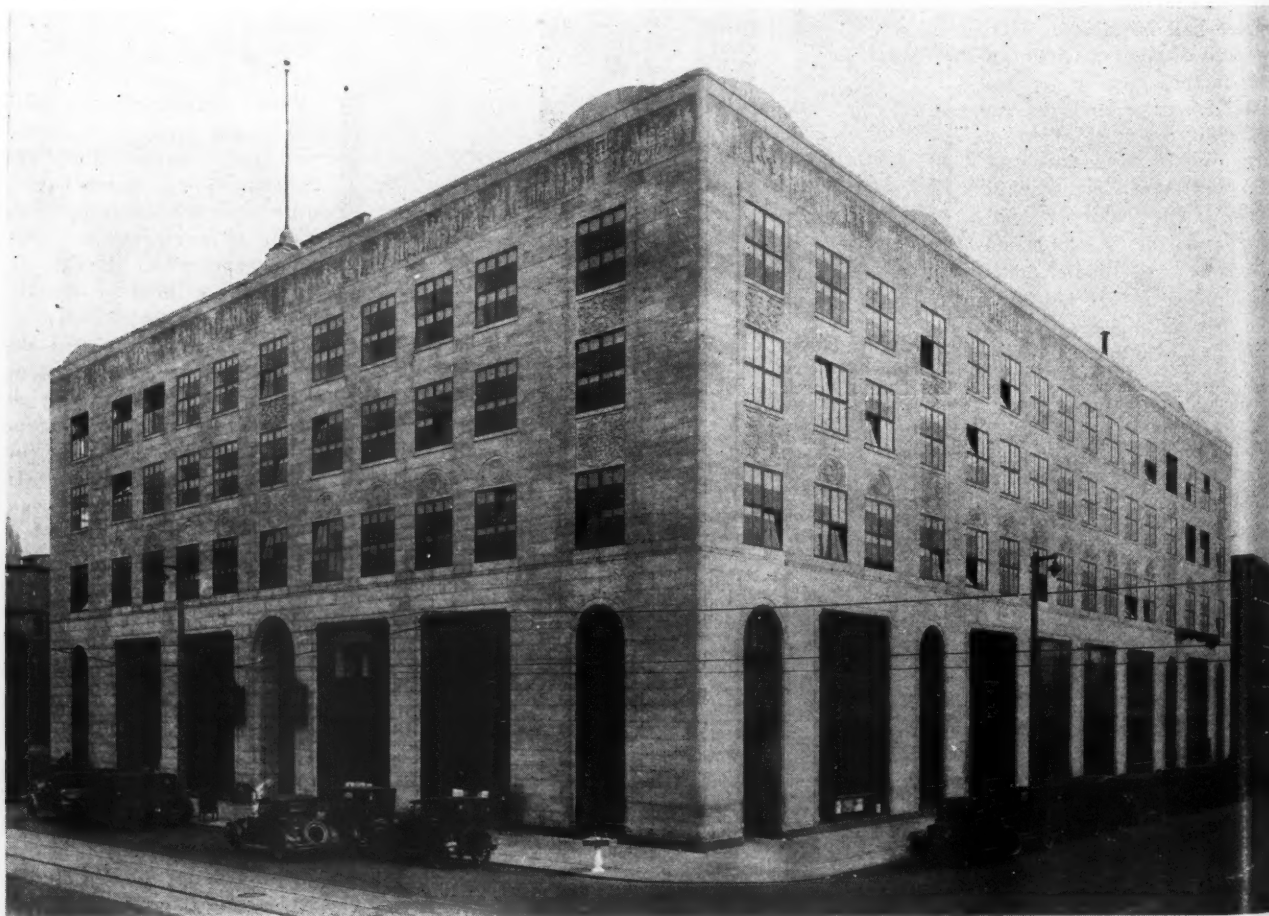
The President's Office in the New Home of the Milwaukee Journal with L. W. Nieman, President and Editor, Seated at His Desk.

wide rectangle, which permits of maximum utilization of space. The exterior is designed in the Italian-French Renaissance style, and facing is pink Kasota marble. All window openings are flush with the exterior walls.

The almost severe simplicity of the exterior is relieved by seven great arches, placed at balanced intervals in the north and west walls of the building and extending above the second floor; by a series of publishers' and printers' marks in lunette form, carved into the stone in the arches

the construction of a new bridge over the Milwaukee River, to become a thoroughfare of the first importance, and because it was only a block distant from Cedar Street, which may some day be the city's plaza leading to its public buildings grouped at a Civic Center. The location, also, is only a few blocks distant from rail terminal, permitting quick delivery of newsprint, which is a large item in the cost of a metropolitan newspaper.

The building, which cost approximately \$2,000,000, is one-half block square, and has a floor area of 165,000 square feet, in the form of a



The New Home of the Milwaukee Journal in Which the Demands of Utility and Beauty Have Been Harmonized. A series of publishers' and printers' marks are carved in the stone arches above the third story windows and life size frieze at the top depicts the evolution of news and its dissemination.

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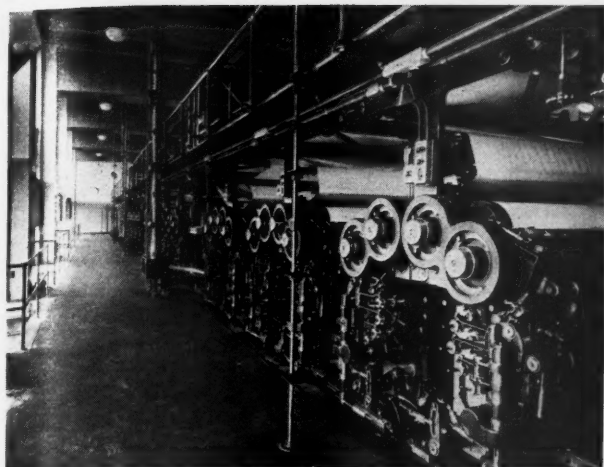
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Daylight Press Room, Visible to Those Passing on the Street, Has a Capacity of 108,000, 32-Page Papers an Hour.

above the third story windows; and by a carved frieze of life-size figures, depicting the evolution of news and its dissemination from the earliest times, which extends entirely around the two street sides just below the top coping.

Nearly one-half of the first two floors and a part of the fifth floor of The Journal's new building have been arranged to serve the public. Rest rooms, waiting rooms, telephone, telegraph and postal stations, tour and travel bureau, an auditorium seating 300 persons, and a visitors' gallery are among the features. The press room has been located directly on the street so that even the passersby can see the entire press and reels in operation.

The main lobby is as large as a city lot. In addition to want ad, subscription and general information counters, it contains the offices of The Milwaukee Journal Tour Club, an organization of 30,000 motorists, conducted by the paper. Last year more than 200,000 questions were answered by the Tour Club. To extend this service to the public still further nearly one-third of the lobby has been turned over to the tour department. Telephone, telegraph and postal stations complete the public service in the lobby.

Adjoining the lobby is a series of rest and waiting rooms as luxuriously furnished as the best hotels. Comfortable davenports, wicker tables and chairs, and writing materials are supplied to make the visitors feel at home. Guides are employed daily, except Sunday, to escort visitors through the entire plant.

On the second floor a lounging room has been furnished for the convenience of employes and visitors. Adjoining this at the rear of the press room is a visitors' gallery running nearly the full length of the building, from which the entire press room can be seen.

On the fifth floor an auditorium seating 300 persons has been placed at the service of the public. This is at the disposal of any group that wishes to discuss matters of public interest. For small committee meetings, several small conference rooms are available for public use.

The basement, given over to paper storage, is large enough to hold a two months' supply. The reel room, to which the paper rolls are delivered automatically to feed the hungry presses just above, is be-



The Composing Room, One Link in the Straight Line Production, Receives the Copy Through Pneumatic Tubes.

tween the basement and the first floor.

The first floor contains, besides the public services already mentioned, a daylight press room two stories in height running nearly the full length of the Fourth Street side; stock room for small stores and office supplies; and loading platform. The second floor, aside from the part used as the press room, is devoted to club rooms, lounge and mailing room.

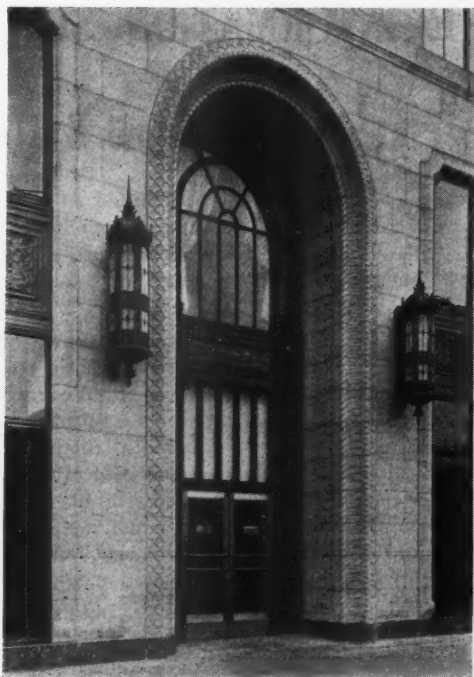
The third floor houses, in an open room 150 by 142 feet, one of the largest office rooms in the state, the general business offices of The Journal, including advertising, circulation, accounting, statistical and administrative divisions.

The fourth floor provides for editorial activities and includes the news room, exchange and Sunday departments, a cafeteria, hospital, library, telegraph news rooms and laundry. The fifth floor is given over to the art, engraving and stereotyping departments, the composing room, 81 by 88 feet, the job printing and planning departments, and the auditorium.

From the standpoint of sanitation and general working conditions, making for efficient production, The Journal plant is unexcelled by any newspaper in America. A modern ventilating system, scientific lighting arrangements minimizing shadows, the elimination of press vibrations outside the press room, killing the press and telegraph noises by sound insulations, conveyor and pneumatic tube systems, redwood block floors in mechanical departments—these suggest only a few of the innovations which The Journal has adopted to insure the maximum comfort of its workers.

In addition to the many windows, the mechanical departments on the fifth floor have "saw-tooth" skylights. This expanse of glass roof permits the entrance of natural "north" daylight, without glare, to all typesetting equipment and machinery. Not a pillar obstructs the lighting.

The full capacity press room equipment will consist of nine octuple presses of four units each, 36 units in all, together with two 12-cylinder color presses. Three octuple presses, or a total of 12 units and one 12-cylinder color press have already been installed. This equipment assures a present capacity of



The Main Entrance of the New Milwaukee Journal Building Is Typical of the Beauty Apparent in Every Detail.

108,000 32-page papers per hour—a production capacity exceeded by only a few of the country's largest newspapers.

The idea of the straight line production has been rigidly adhered to. The roll of paper enters the building in a gravity slide from the south alley and rolls to a loading platform. From here it is taken on a tiering machine into the large storage rooms. When it is needed for printing, it is delivered by another tiering machine to a platform on the reel room floor, loaded onto a "dolly" (a small hand car with a concave surface to fit the roll) and delivered on miniature track to the reels, which feed the presses.

Through the presses and up to the ceiling by a series of conveyors the paper goes, now a finished product, into the mailing room on the second floor, just back of the press room, and then down a second gravity chute to the loading platform where The Journal trucks are waiting to make their deliveries. The loading bay has accommodation for 12 trucks at one time, all under cover.

Straight line production holds also for news and advertising copy. News copy, which originates on the fourth floor, is sent by pneumatic tubes to the composing room. Here it is distributed two ways from the copy cutter to the linotype operators. The correction bank and the proof-reading table are both on the route to make-up banks. Advertising copy goes from the sales department, through the planning department, to the ad alley, meets the news type at the forms, and the completely made up pages are delivered to the stereotyping department, mat-making and casting machines, in the form of curved plates, and thence, down a gravity elevator to the press room where they are distributed to the various units of the press by an automatic conveyor. ❀

New Ways for Old

(Continued from page 90)

ordinary straw mixture on distillation has been made to yield 1,600 pounds of chemical products worth \$250. One of these is furfural, used as a flavorer of tobacco, a solvent for dyes, a germicide and fungicide, and an important ingredient in the manufacture of leather dressings, nitrocellulose and lacquer. A few years ago furfural sold for \$10 or more per pound. Now it is in large supply for 15 cents a pound. Developments of this kind are making the farmer a factor in a number of chemical businesses, including the production of perfume.

The wide introduction of thousands of improved practices means the elimination of unnecessary losses of time, effort and material. Wealth created in this way is real and permanent. It produces a revenue in which all may participate. Here we have the real answer to the cause of our present prosperity. Our advances in this direction have produced gains that will not disappear overnight. Paper profits created entirely by speculation have no such stability.

The Chicago Merchandise Mart

(Continued from page 95)

- 4—General Motors, Detroit, 20,411,000.
- 5—Union Trust, Cleveland, 20,000,000.
- 6—Railway Exchange, St. Louis, 18,898,000.
- 7—Illinois Merchants Bank, Chicago, 17,850,000.
- 8—Continental & Commercial Bank, Chicago, 13,200,000.
- 9—Woolworth Building, New York City, 13,200,000.
- 10—Straus Building, Chicago, 10,000,000.

The big business of the country is now done in concentrated market places, as evidenced by the Garment Center and Cotton Goods Center in New York City, automobile rows in all the leading cities, financial buildings, and the Furniture Mart in Chicago. The establishment of the Merchandise Mart is a dramatic development in the program to make Chicago the Great Central Market, a movement which the Chicago Association of Commerce started a number of years ago.

This great Mart, which will house several hundred of the country's foremost manufacturers, wholesalers and importers will be located in the rapidly developing new river district, and will occupy a distinctly conspicuous position just across the river from Wacker Drive at Wells street where the southern facade of the structure will be visible for blocks.

Within the walls of this huge edifice the retail merchants of the United States, Canada and foreign countries will be able to see, under one roof, hundreds of lines of merchandise. The manufacturers' exhibits will include textiles, ready-to-wear, toys, laces, gloves, hosiery, corsets, millinery, silverware, glass, rugs, knit goods, shoes, men's wear, notions, fancy goods, art and antiques, jewelry, trunks, toilet articles, house furnishings, office equipment and scores of other merchandise displays. Among the largest tenants will be the wholesale and manufacturing sales departments of Marshall Field & Company.

On all floors of the Mart will be great corridors, with all the appearance of boulevards, 650 feet in length, on either side of which will be the shops displaying their varied lines—veritable "business streets." These great corridors will be impressively treated architecturally and with the large

space available it will be possible to house the selling activities and warehousing of many allied concerns on one floor, thus attaining the advantages of concentrated grouping.

The facilities of handling merchandise within the building will embody the best and most modern achievements of engineering science, including fast elevators, freight conveyors of both the gravity and endless chain type and quick horizontal distribution on every floor.

Probably no building in the world will have such facilities for receiving and shipping merchandise as the new Merchandise Mart. The entire ground level below the street floor will be a modern freight station. Private tracks for incoming carload freight will extend under the building.

FREE INFORMATION SERVICE

for

Home Planners and Home Builders

THE ColorKeed Home Plans presented in this magazine have many special points of excellence which are of particular importance and timeliness to those of our readers who right now are facing the home building question—with its joys and its problems.

We illustrate these home designs and show the room arrangements, but our space for description is so limited that we are not able to cover all points. We know there is much additional information desired by subscribers about to build, which would be very valuable to them. Since we have all data pertaining to these ColorKeed Homes we are glad to offer our readers a free service of information, whether questions pertain to the estimated cost, the method of construction, suitable materials to use, special equipment or features, or any other information whatsoever.

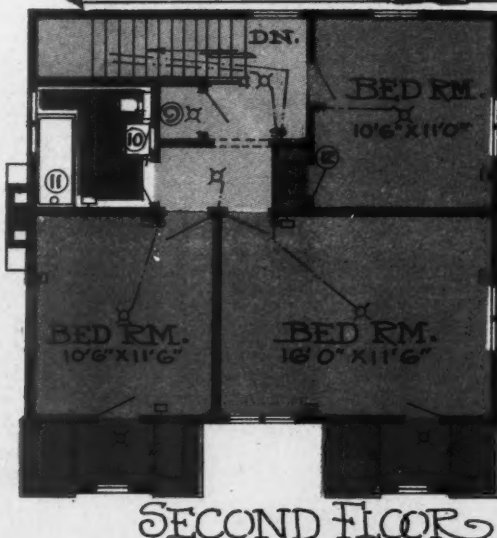
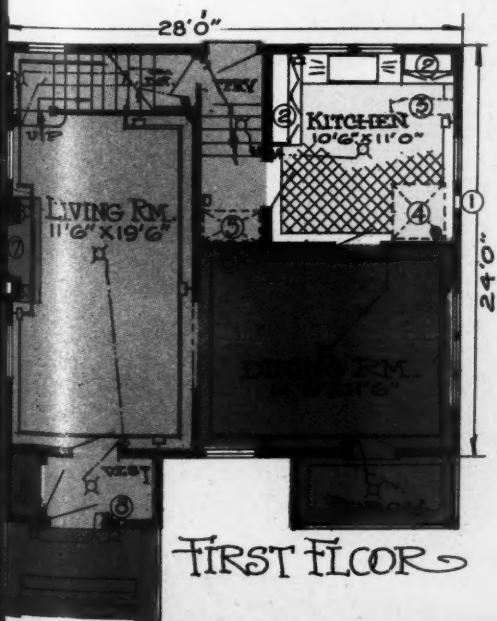
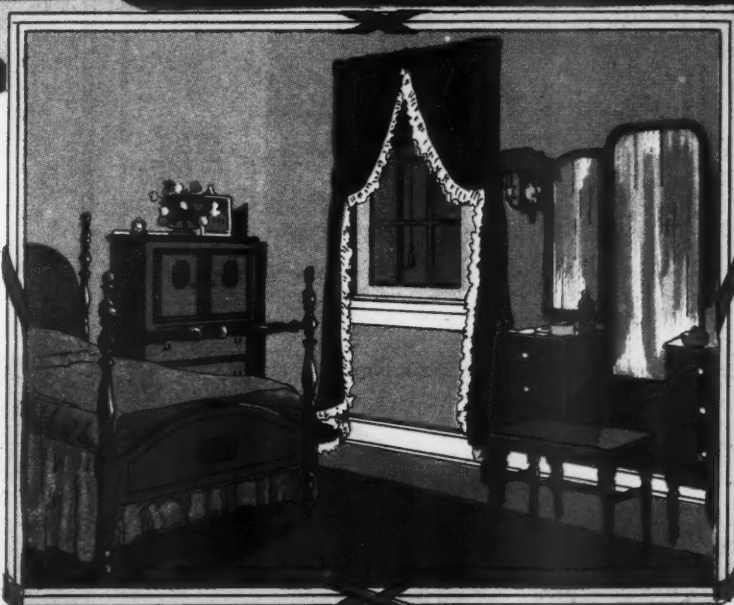
Limited space in the magazine prevents publishing all this information; but if you will write AMERICAN BUILDER Home Planning Service, 1827 Prairie Ave., Chicago, we will be very glad to give you direct by mail any information desired.



The THORNDALE

THE special equipment recommended for this attractive Colonial home is as follows:

Kitchen Ventilating Fan	Ⓢ Efficiency Wardrobe	Water Supply System
Kitchen Cabinets	Weatherstrips	Hot Water Supply
Ironing Board	Storm Sash	Water Softener
Gas or Electric Range	Screens	Radiant Gas Heaters
Refrigerator	Lighting Fixtures	Electric Wall Type Heaters
Thermostat	Convenience Outlets	Casement Windows
Fireplace Throat and Damper	Electric Panel	Dishwashing Sink
Built-in Mail Box	Washing Machine	Automatic Cellar Drainer
Linen Closet	Ironing Machine	Radiator Covers or Furniture
Medicine Case	Clothes Dryer	Disappearing Stairway
Tub Shower	Coal Chute	
	Heating Plant	
	Oil Burner	

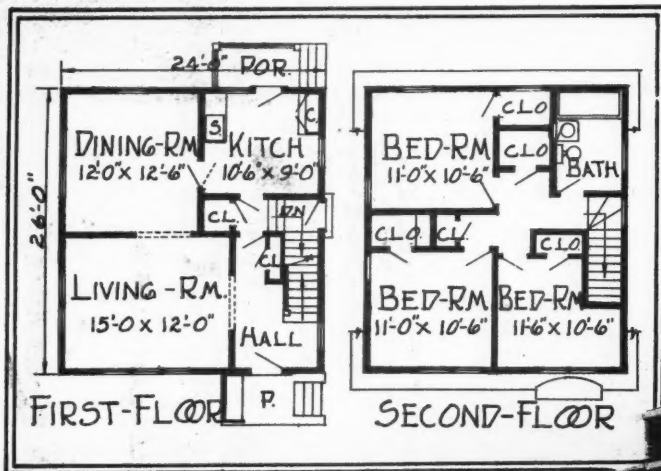


Copyright, 1928,
by William A. Radford,
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Pat. March 15, 1921,
and Sept. 30, 1924.
ColorKeeD Plan
Patented April 10, 1927.



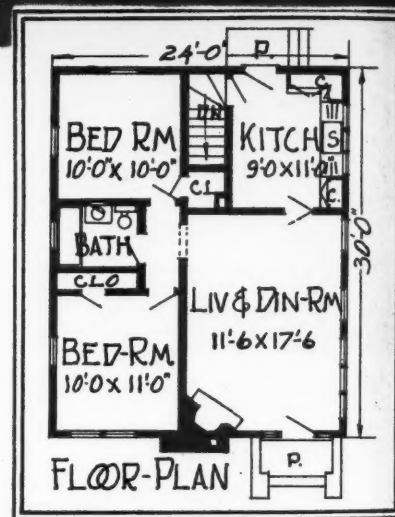
The QUARTSBURG

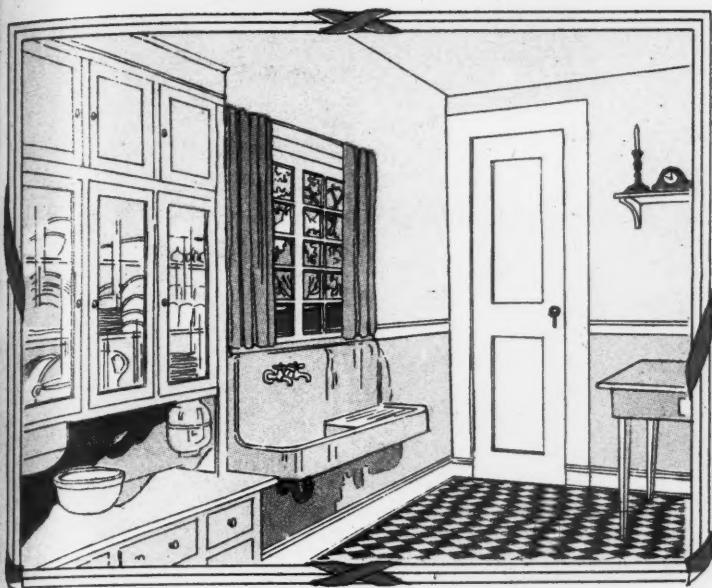
Above and to the right a very interesting four-room cottage, 24 by 30 feet.



The QUESTA

Below and to the left a gem of a Dutch Colonial 26 by 24 feet, containing six rooms.



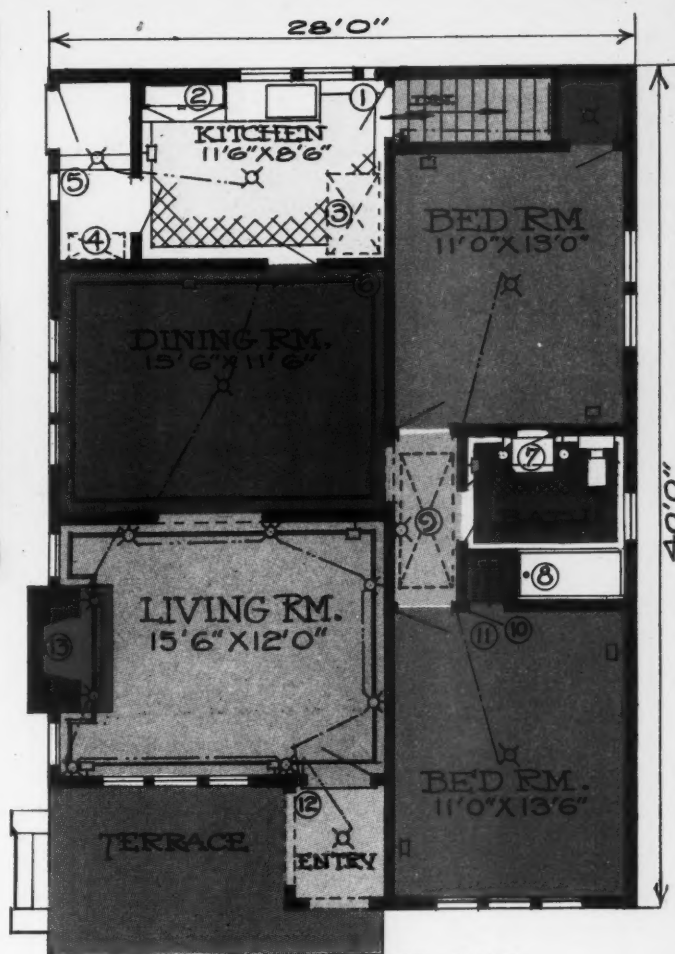


The TILDEN

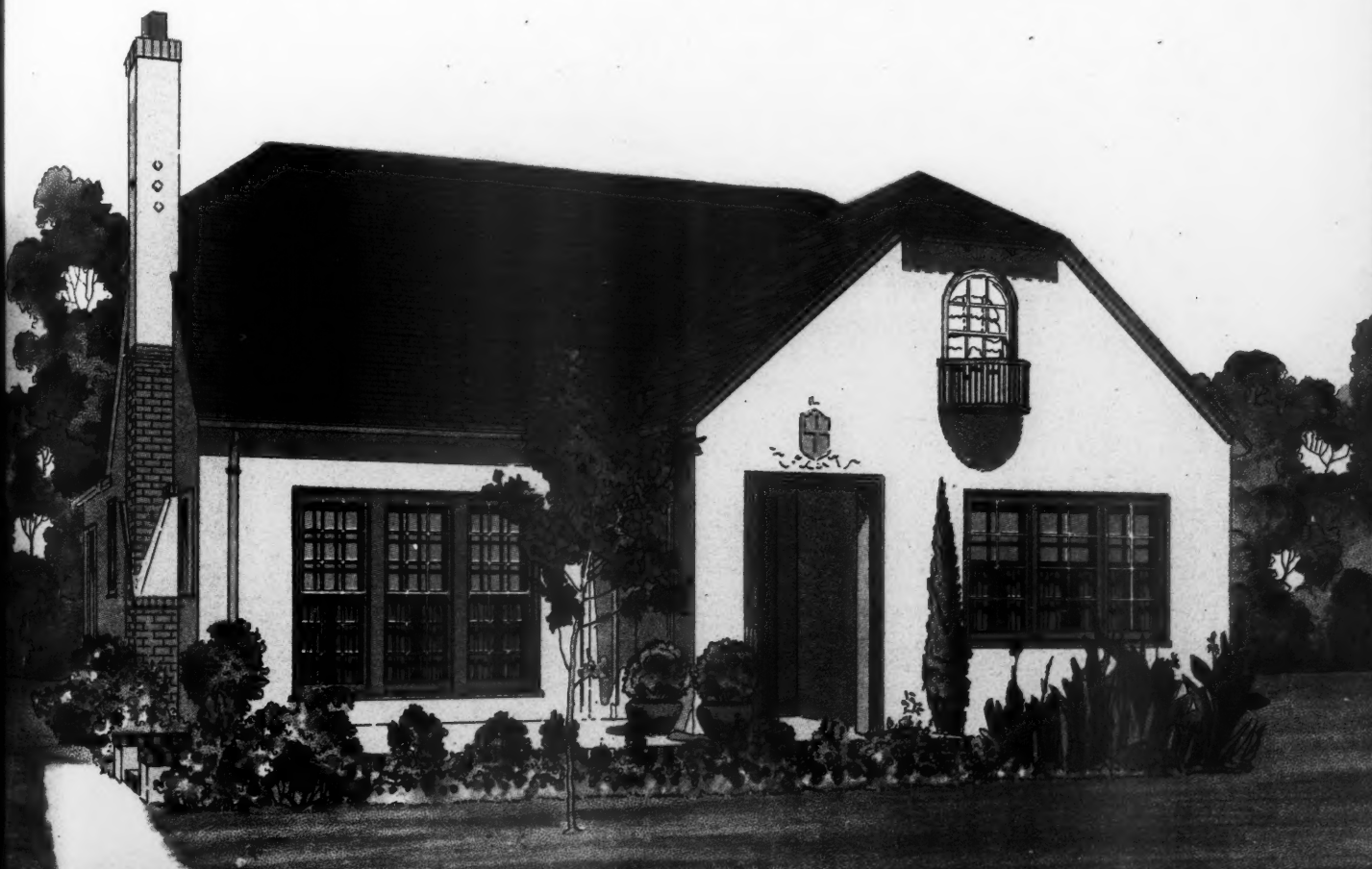
A FRENCH cottage with a dash of the Old World charm is presented in this cozy bungalow of five rooms. Such houses are a satisfaction to build and a joy to live in. They never lack for a buyer or a tenant. The color sketch above shows how conveniently the kitchen of this house is arranged.

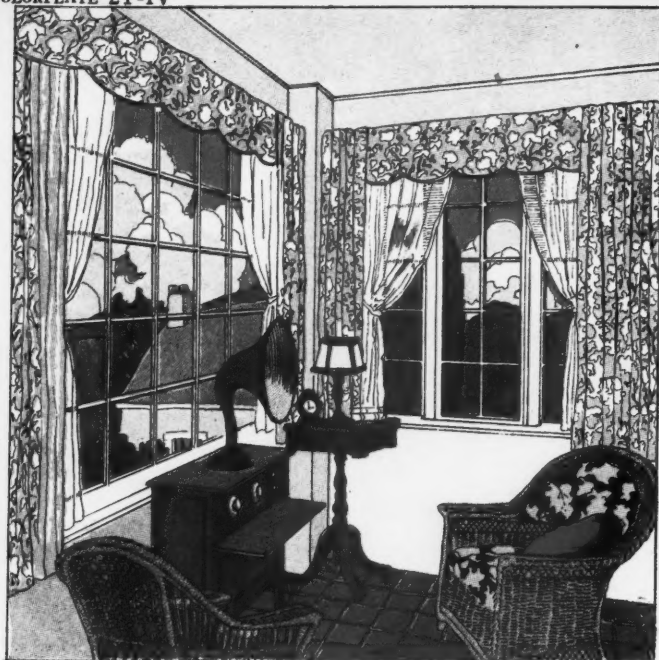
Key to Equipment

- | | | |
|--------------------------------|-------------------------------|------------------------------|
| ① Kitchen Ventilating Fan | ⑨ Built-in Mail Box | Heating Plant |
| ② Kitchen Cabinet | ⑩ Fireplace Throat and Damper | Oil Burner |
| ③ Gas or Electric Range | Weatherstrips | Water Supply System |
| ④ Refrigerator | Storm Sash | Hot Water Supply |
| ⑤ Package Receiver | Screens | Water Softener |
| ⑥ Thermostat | Lighting Fixtures | Radiant Gas Heaters |
| ⑦ Medicine Case | Convenience Outlets | Electric Wall Type Heaters |
| ⑧ Tub Shower | Electric Panel | Casement Windows |
| ⑨ Disappearing Stairs to Attic | Washing Machine | Dishwashing Sink |
| ⑩ Efficiency Wardrobe | Ironing Machine | Automatic Cellar Drainer |
| ⑪ Mirror Door | Clothes Dryer | Radiator Covers or Furniture |
| | Coal Chute | |



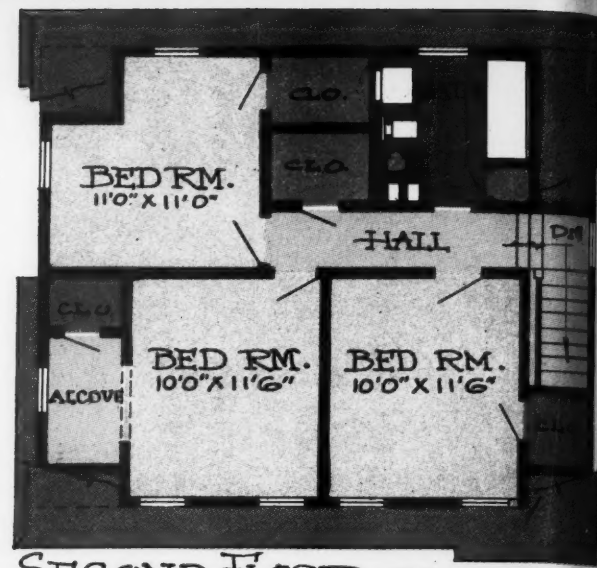
FLOOR PLAN



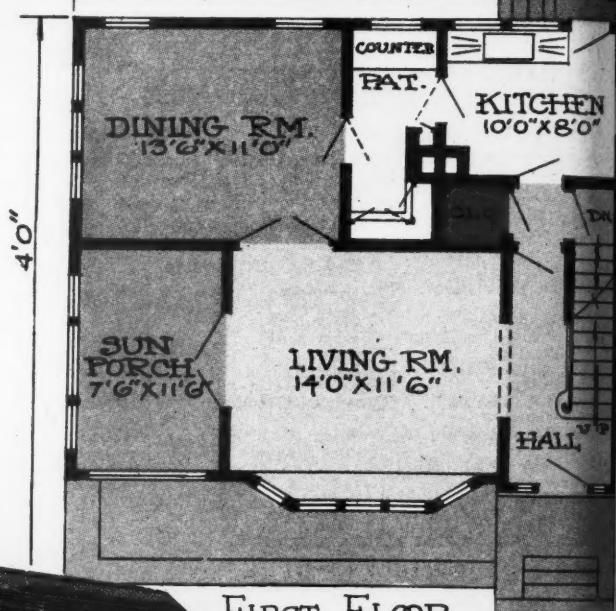


The TIMBERLAND

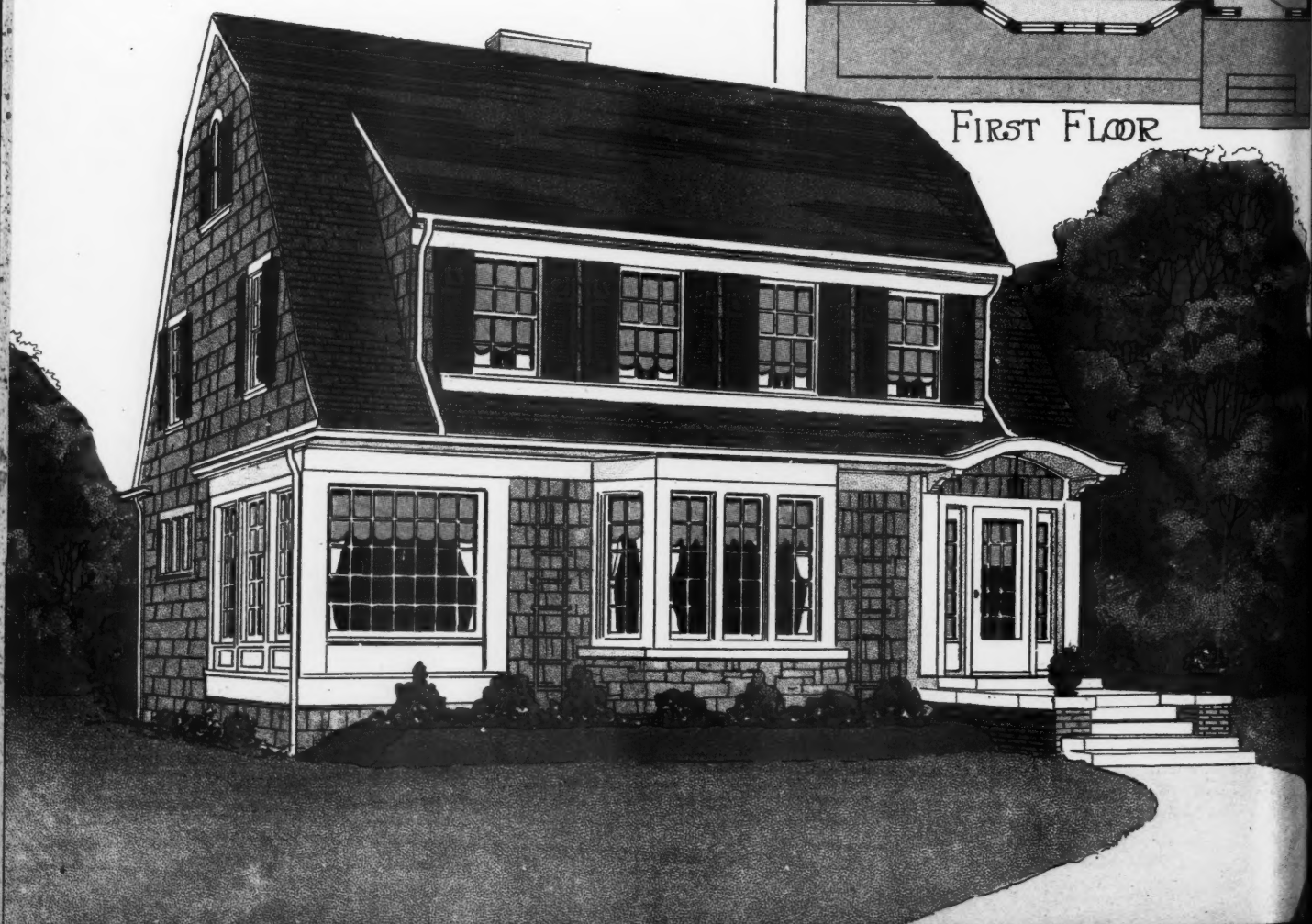
A DUTCH Colonial home of extremely graceful lines containing six rooms and bath besides the large sun porch and the vestibule hall. For a home of only 24 x 30 feet this contains an exceptionally large amount of space. Color sketch above shows the sun porch used as a radio room.



SECOND FLOOR
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FIRST FLOOR





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OUR FRONT COVER HOME



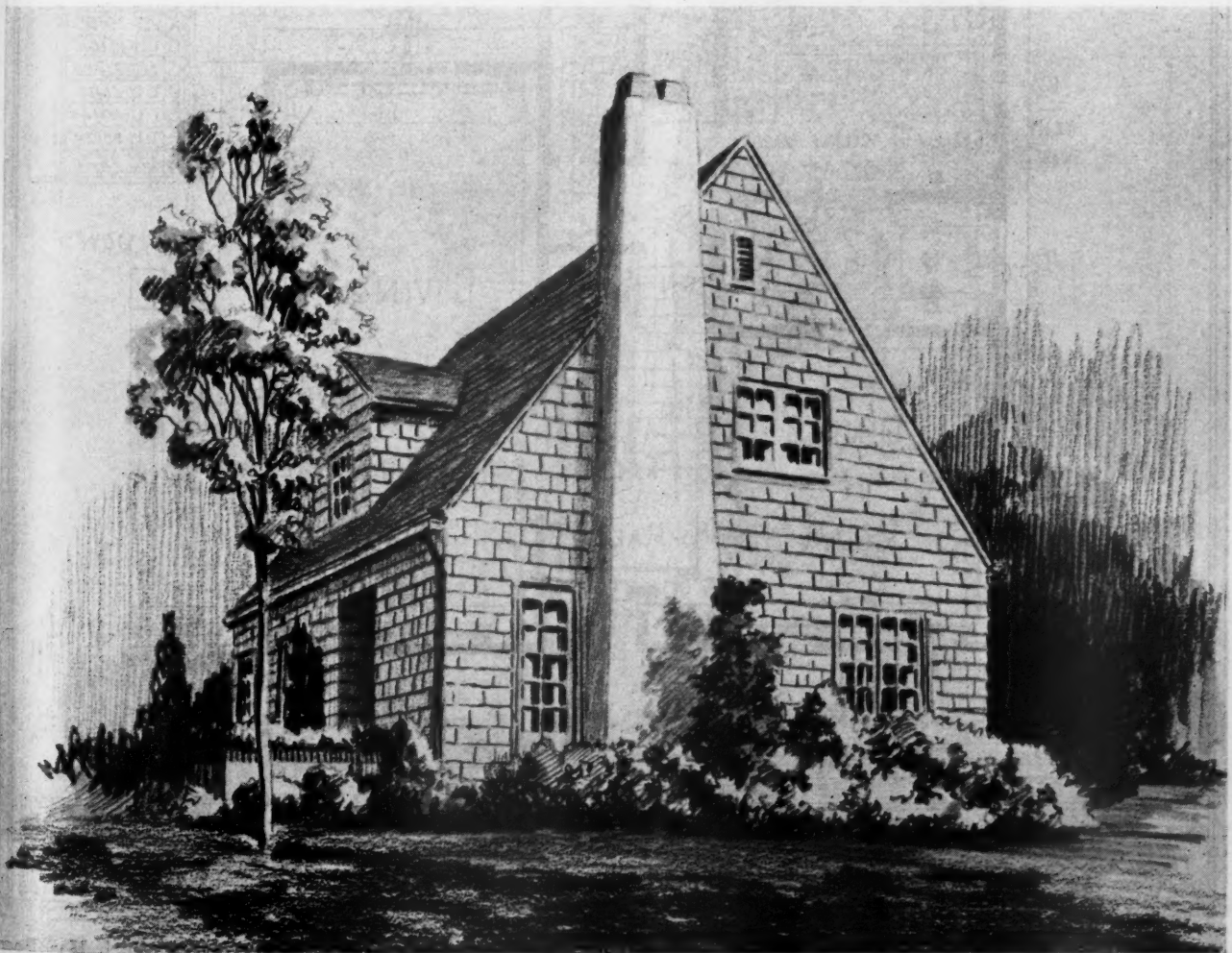
A Six-Room Home Typically American in Its Provision for Every Comfort and Convenience of the Average Family

THERE is, from time to time, much discussion of an "American style" of architecture, of what is the typical American home. Houses in this country are being built in every conceivable style and in unlimited variations and combinations of the better known architectural styles. As yet, however, no single, distinctive, American style of residential architecture has been developed. But in every one of the houses which we see being built all around us there are certain distinctive characteristics which are stamped as typically American.

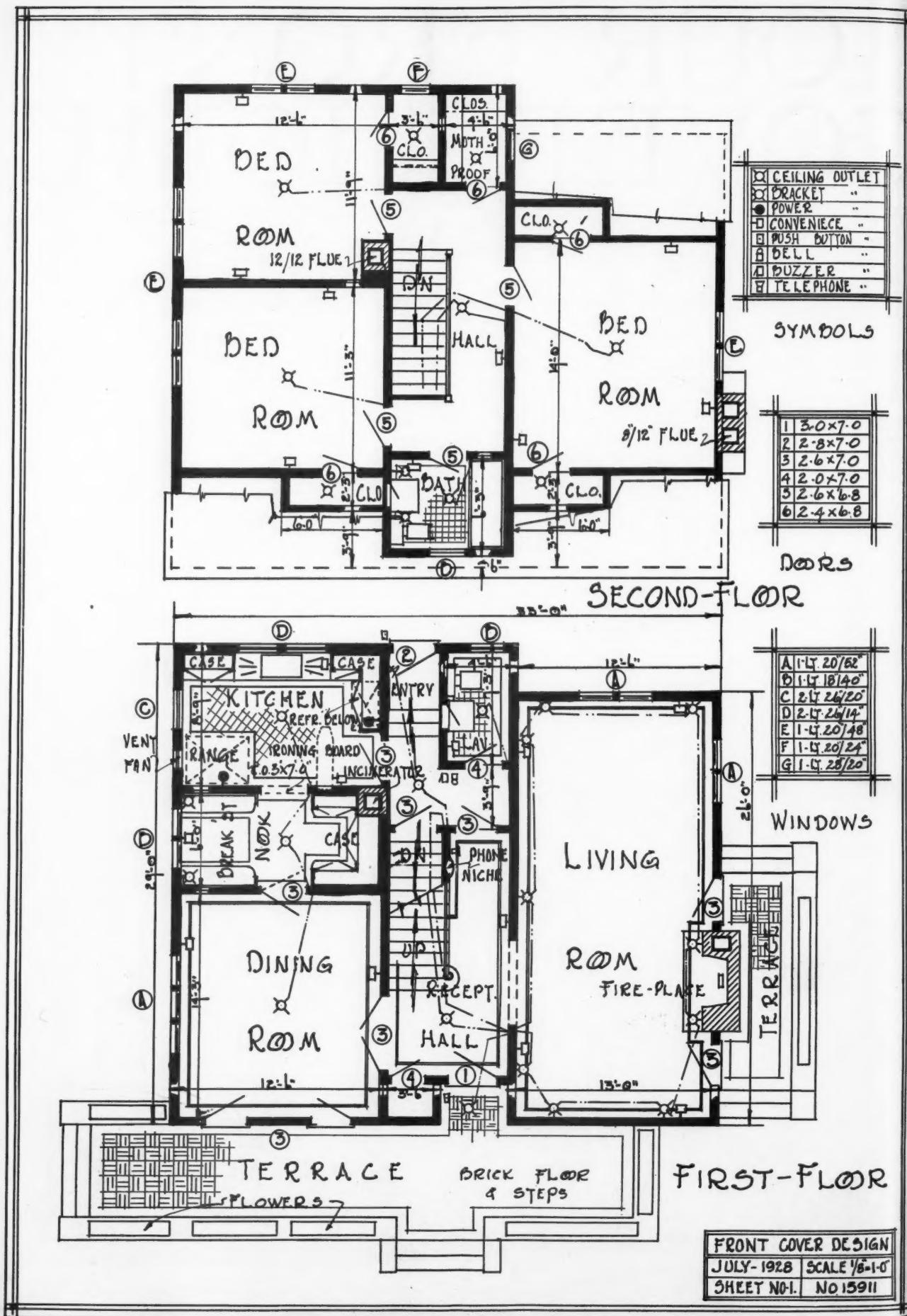
Most of these characteristics are to be seen in the finish and equipment. In no other country can you find homes of average citizens, or even of the more prosperous groups, which contain the many comforts, conveniences and refinements which the average American demands and are to be

found in such homes as that pictured on Our Front Cover. American manufacturers have been working overtime to perfect building materials and equipment till they are offering almost unbelievable beauty, comfort and economy to the prospective home builder.

Another thing which is characteristic of the modern American home is its size. The five or six-room house has been found to offer just the necessary amount of space for the comfort of the average family while reducing the work of housekeeping to what can be handled without becoming burdensome. And so, in presenting Our Front Cover Home, a house of six rooms and breakfast nook, we are offering a design which should appeal to the great majority of families. Complete plans of this house, drawn to scale, are offered on the pages which follow.



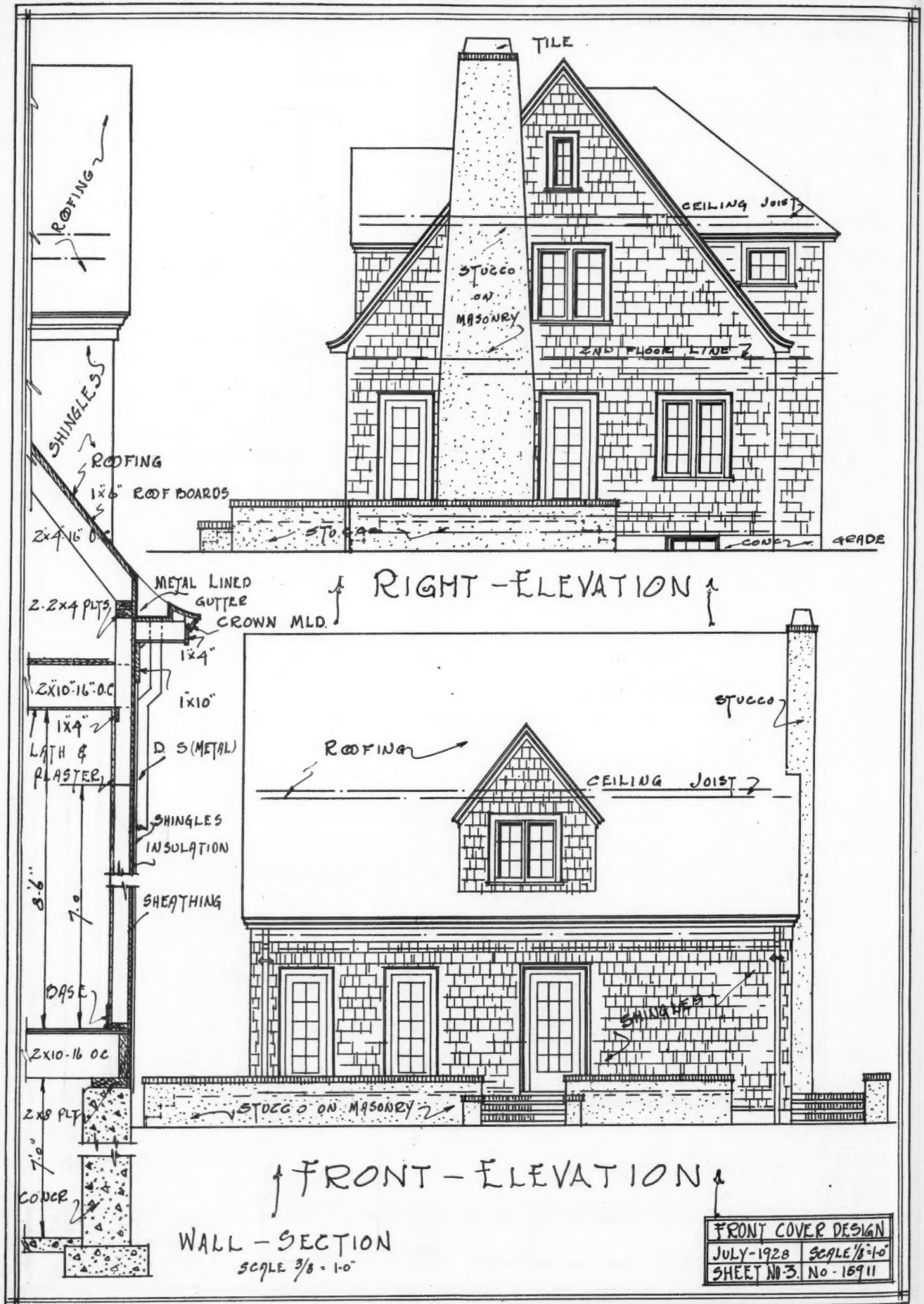
Our Front Cover Home Can Justly Claim to Be Typically American in That It Incorporates Those Many Refinements and Conveniences Which Distinguish Modern American Homes from Those of Other Countries.



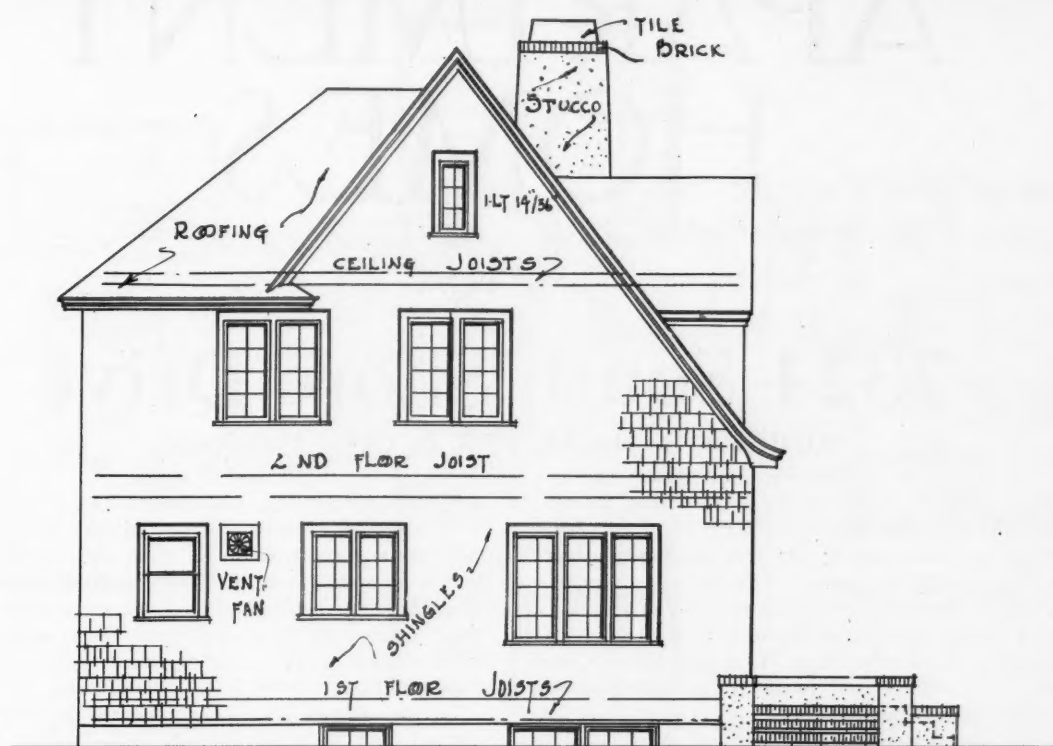
These Floor Plans of Our Front Cover Home Show a Six-Room House with the Breakfast Nook Which Has Been Found so Handy, and with a Downstairs Lavatory Besides.



Here Is the Plan of That Important, Though Formerly Neglected, Place, the Basement, as Well as Various Details of Construction. Elevations Follow on the Next Two Pages.



The Sectional View Shows the Type of Construction Used to Produce Quality in Our Front Cover Home.



↑ LEFT-SIDE-ELEVATION ↑



↑ REAR-ELEVATION ↑

FRONT COVER DESIGN	
JULY 1928	SCALE 1/8"=1'-0"
SHEET NO. 4.	NO 15911.

Here and on the Opposite Page Are to Be Seen the Four Elevations Which Reveal the Appearance of Our Front Cover Home from Every Angle.

APARTMENT HOMES



7321 South Shore Drive

ROBERT S. DeGOLYER & CO., Architects

THE location of "7321 South Shore Drive" in one of the most desirable residential districts of all Chicago, makes an ideal setting for this unusually beautiful building of co-operative homes. The property fronts one hundred feet on South Shore Drive and extends into Lake Michigan a distance of approximately four hundred feet. The property is two blocks from The South Shore Country Club, one of the oldest and most exclusive organizations of its kind in the Chicago district. Jackson Park, with its acres of green groves, lagoons and winding drives, municipal golf links, yacht harbor, bathing beaches and other outdoor recreational facilities, is within convenient distance.

The design of the 7321 South Shore Drive building is unusual enough to make it one of the prominent buildings of Chicago. The architect's inspiration was derived principally from the works of famous architects of Italy during the thirteenth and fourteenth centuries, at which time the development of face brick and terra cotta reached a point of perfection. The style is known as Late Italian Romanesque, and if the building were christened architecturally

it could appropriately be named "The Lombardy."

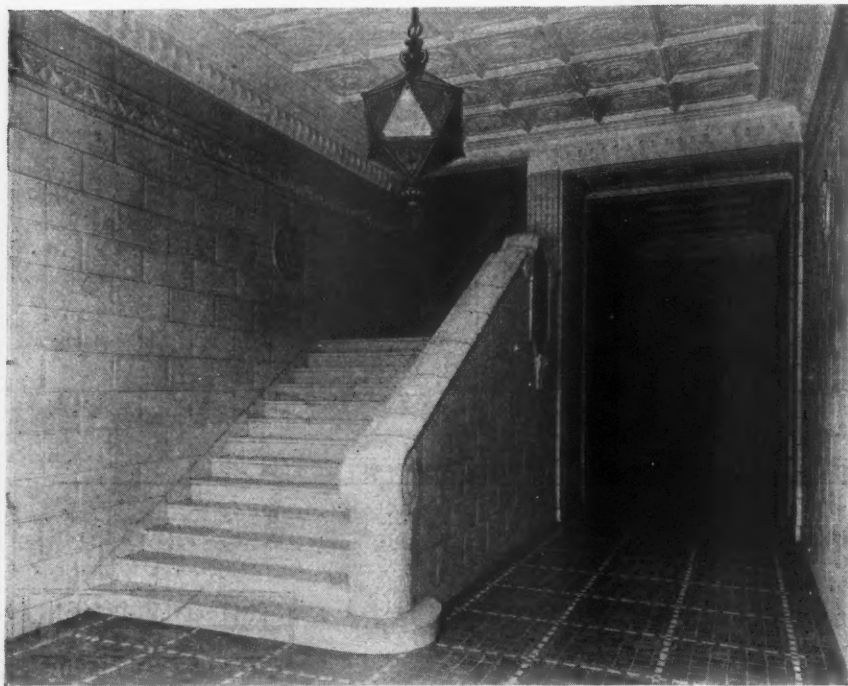
The entire exterior of the building is of pressed brick and terra cotta trim of a color and texture designed to create an appearance at once as unusual as the architectural design. The architects have done away with the usual ugly pent houses by inclosing them in a setback story with tiled pitched roofs topped by an octagon tower which will have marine colored lights illuminating arched windows. The fire escapes have been ingeniously obscured and converted into wrought iron balconies, thus adding to the beauty. The roof on the lake side has been skillfully worked out for a roof garden with a timber pergola.

The contour of the building in plan resembles a "crosslet" and lends itself readily to the Romanesque style. The cloistered loggia is a distinctly appropriate architectural feature of this design and is a practical form of shelter to those entering the building.

The building will contain a total of 60 apartment homes, including 12 of eight rooms and four baths, 24 of seven rooms and three baths, 12 of six rooms and three baths, and 12 of six rooms and two baths. All apartments com-

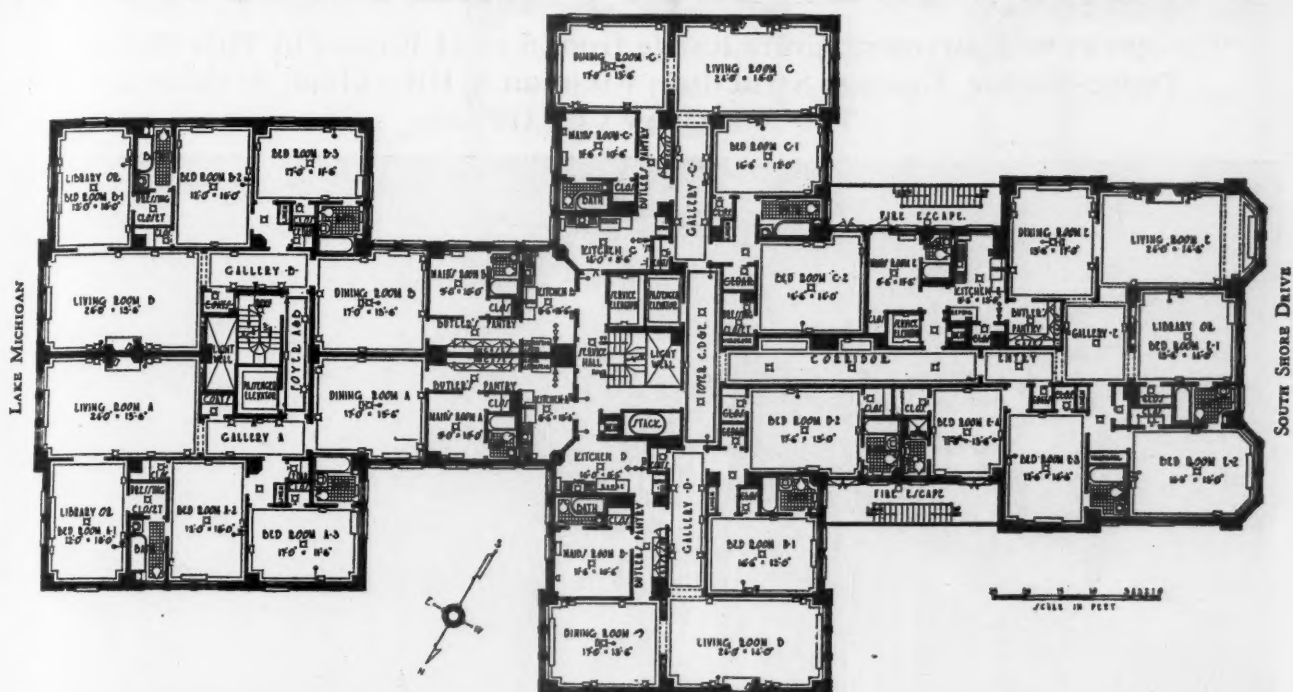
mand a view of Lake Michigan. The square foot area of the apartments is greater than is usually found in rented apartments and many unusual features which make for convenience and home comfort are to be found here, such as butlers' pantries, cedar closets, individual electric refrigerators, glass-in showers, built-in wardrobes, linen cases, book cases, fire places, clear oak flooring, canvassed and panelled walls, six-burner range with oven, broiler and heat regulator, filtered water, etc. The walls are sound-proofed and the building is being constructed in accordance with the requirements of the Chicago Board of Underwriters and the City ordinance governing fireproof buildings.

The convenience of a private bathing beach is provided just a few steps from the lake side entrance and on the first floor are canoe lockers and shower rooms for both men and women. Putting greens and tennis courts are at the water's edge, while indoors are recreation rooms for the children's use when the weather is inclement. A large attractive directors' room, which may be used as a card party room, is provided just off the main lobby. Also



First Impressions Are Always Most Important and So Much Attention Is Being Given to Making the Entrance Lobbies of Our Modern Apartments and Apartment Hotels as Effective as Possible.

there are baby carriage rooms, ample store rooms and laundries. The roof garden affords a magnificent view of the ever changing waters of Lake Michigan and on clear days the sand dunes of Indiana may be seen miles in the distance.



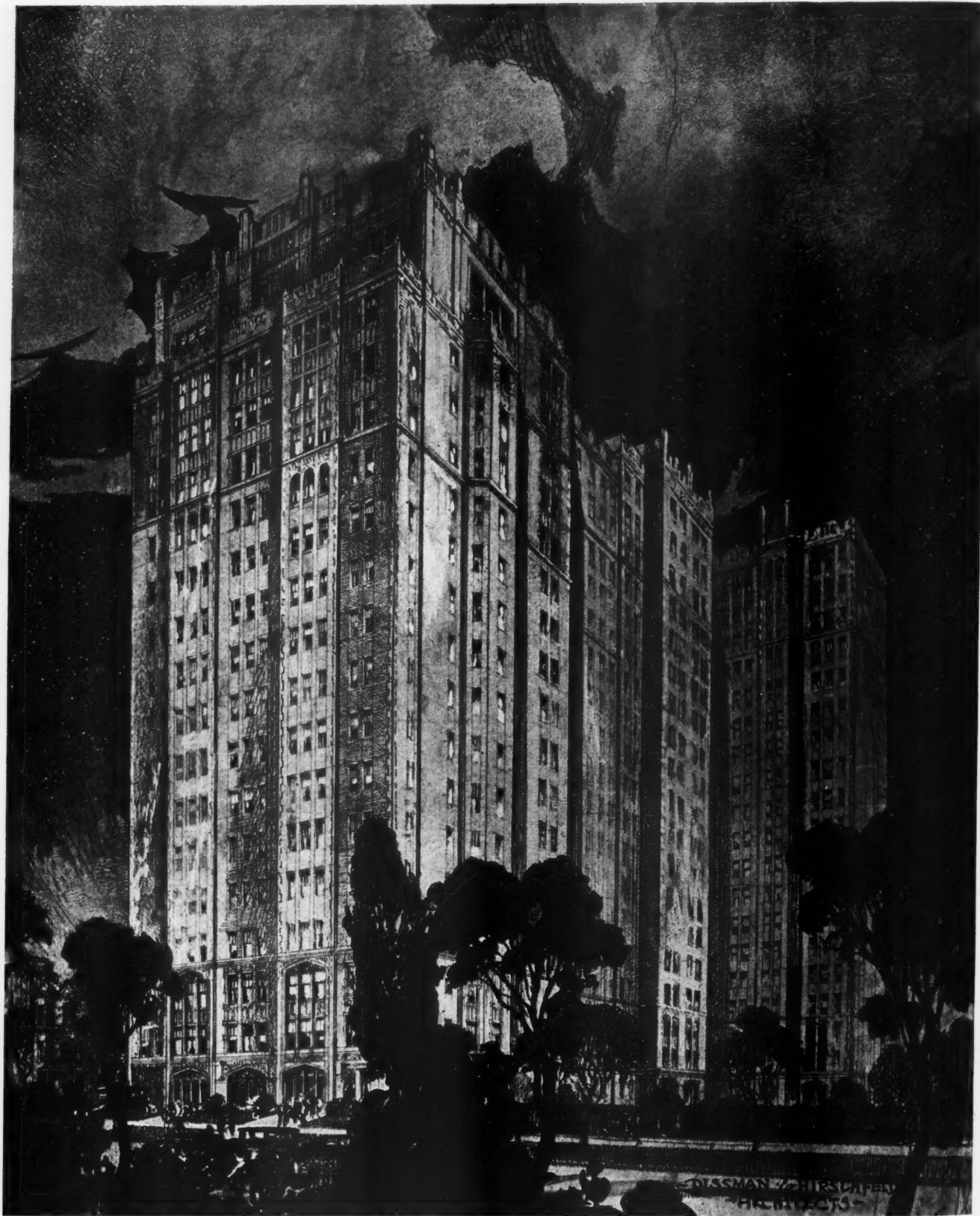
A Typical Floor Plan of "7321 South Shore Drive" Which Is Arranged in a Crosslet and Contains Six and Eight-Room Apartments, with Two to Four Baths in Each, All Affording a View on Lake Michigan.



"7321 South Shore Drive," One of the Newest and Handsomest of the Large Co-Operative Apartment Buildings, Which Are Being Built on Chicago's Lake Front. It was designed by Robert S. DeGoyer & Co., Architects, after the style known as Late Italian Romanesque.

Twenty-four-forty Lake View Av.

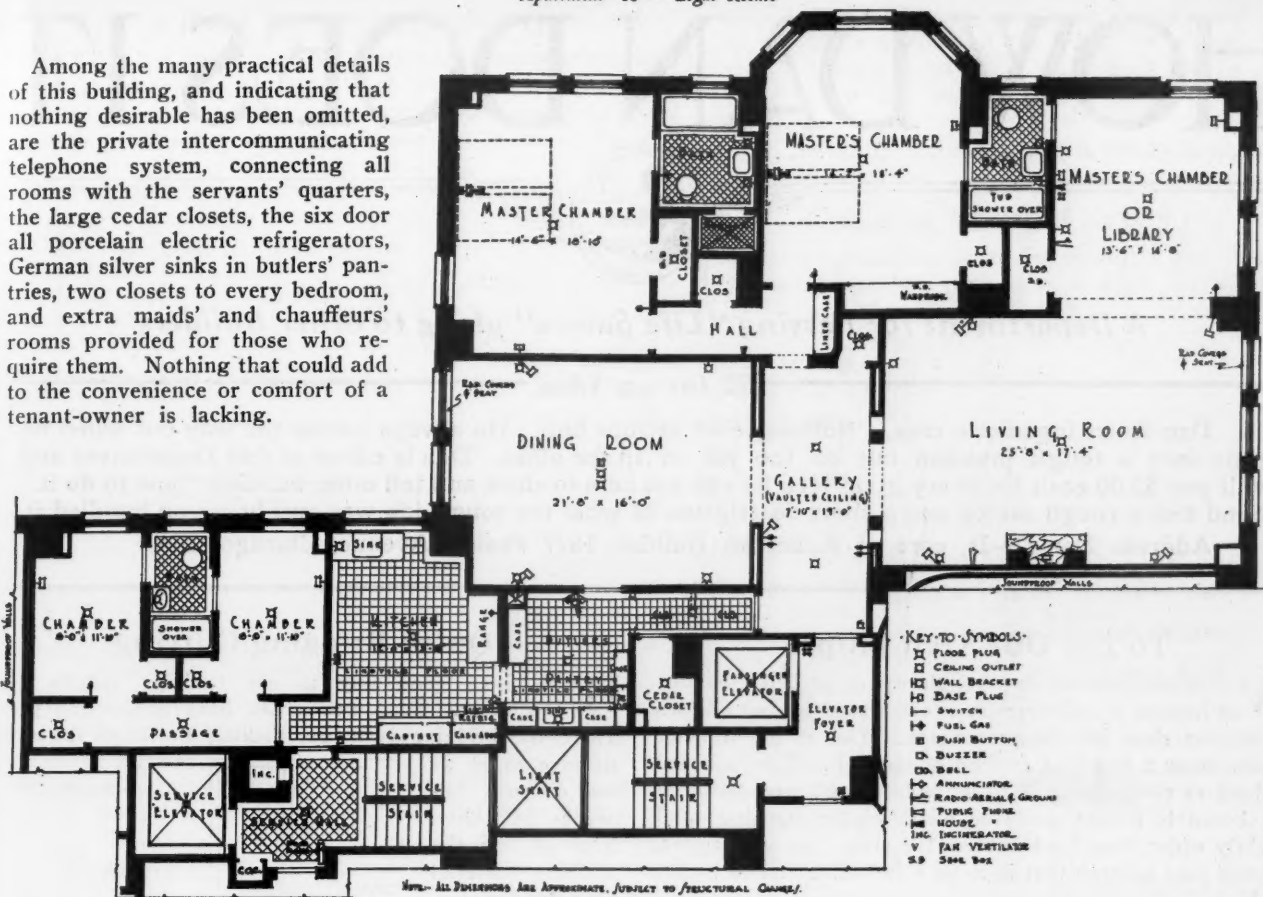
Co-operative Apartment Units Range from 5 to 14 Rooms in This Modern
Tudor-Gothic, Chicago Structure; Rissman & Hirschfeld, Architects;
The Lake View Co., Owners



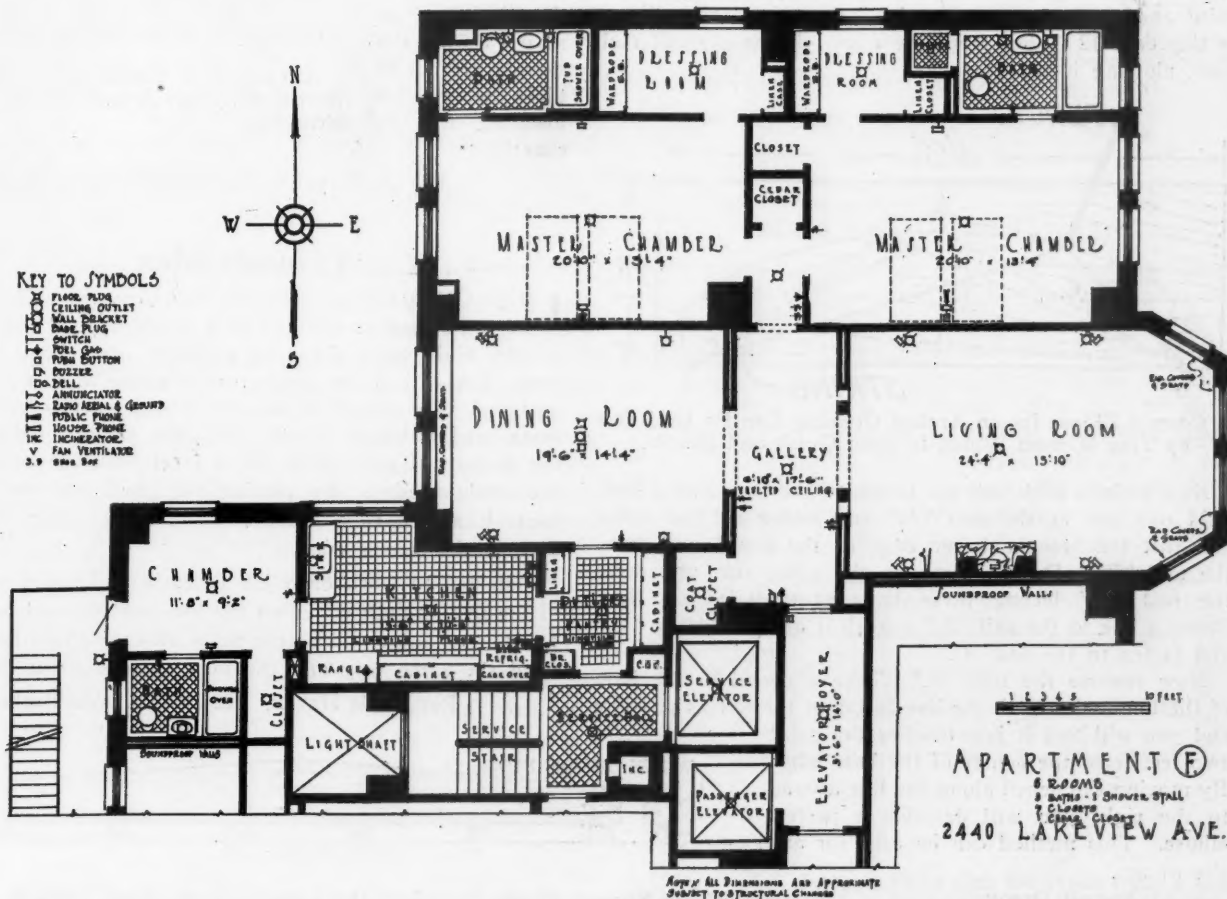
This Is One of the Newest of Chicago's Apartment Homes Groups. It is of reinforced steel and concrete; 17 stories high; has homes ranging in size from 5 to 14 rooms; spacious closets; cedar closets; tiled enclosed showers; individual porcelain electric refrigerators; incinerators.

Apartment "A"—Eight Rooms

Among the many practical details of this building, and indicating that nothing desirable has been omitted, are the private intercommunicating telephone system, connecting all rooms with the servants' quarters, the large cedar closets, the six door all porcelain electric refrigerators, German silver sinks in butlers' pantries, two closets to every bedroom, and extra maids' and chauffeurs' rooms provided for those who require them. Nothing that could add to the convenience or comfort of a tenant-owner is lacking.



Apartment "F"—Six Rooms



Two Typical Apartment Layouts in the Twenty-Four-Forty Lake View Building; a Six-Room and an Eight-Room Unit.

HOW DAN DOES IT



A Department for Passing "Life Savers" along to other Builders

\$2 for an Idea

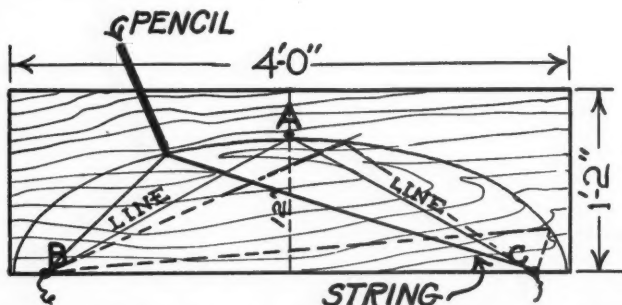
Dan is an ingenious cuss. Nothing ever stumps him. He always knows the way out when he runs into a tough problem out on the job or in the office. Dan is editor of this Department and will pay \$2.00 each for every good idea he can use here to show and tell other builders "how to do it." Send him a rough sketch and a short description of what the tough job was and how you handled it.

Address Dan-Do-It, care of American Builder, 1827 Prairie Avenue, Chicago, Ill.

To Lay Out Arch Ellipse

WITH the present day popularity of arched openings in houses, it is frequently necessary to lay out ellipses of various sizes for these openings. This is not difficult if you know a practical method of doing it. Take a board as long as the opening is to be wide (it will not matter if the board is longer than the width of the opening) and slightly wider than the height of the arch. As an example, we will take an arch that is to be 4 feet wide and 12 inches high.

Take the center of the board at one edge and measure half the width of the opening, in this case 2 feet, in each direction. Mark the points. Next draw a line at right angles to this edge of the board, vertically, from the center point and mark, at the point "A," the top of the ellipse, in this case 12 inches from the edge. Drive a small nail here, allowing it to protrude.



A Correct Ellipse for an Arched Opening Can Be Laid Out by This Method Which Is Both Quick and Simple.

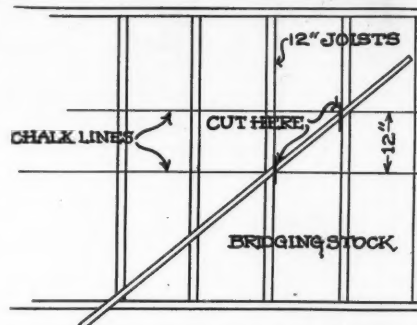
Now make a stick half the length of the base line, 2 feet, hold one end at the nail "A," and swing till the other end just touches the lower edge of the board and drive the nail "B." Do the same on the other side and drive the nail "C," letting these nails protrude also. Next fasten a line to the nail "B," stretch it around "A" to "C," and fasten to the nail "C."

Now remove the nail "A." Take a pencil in the loop of the line and stretch the line as far to the left as possible and you will find it just touches the point two feet from the center of the base edge. By moving the pencil along the line around to the right you will describe a perfect ellipse. This method can be used for any size of arc.

C. ADOLPH OLSON,
869 Grand St., Bridgeport, Conn.

Quick Bridging Cutting

HERE is a good way to cut bridging quickly and accurately. Snap two chalk lines across the joists where the bridging is to go, making the lines the same distance apart as the distance between the joists. Now place the bridging material diagonally between the lines and across the joists and cut along the sides of the joists as shown in the sketch. If cut in this way the bridging will fit exactly.



A Couple of Chalk Lines Snapped Across the Joists Are an Aid in Cutting Bridging.

ROY A. VAUGHN, 314 Bartlett St., Lansing, Mich.



A Handy Idea

I DISCOVERED a good stunt some time ago while putting down screed or sleepers on a windy day. I found that in the high wind the long straight edge kept turning over. I have had the same trouble where there was much wedging. The sketch shows how I stopped this by nailing some wedge-shaped blocks onto the straight edge with the bottom of each block on a level with the bottom of the straight edge. By placing the block on one of the joists it served as a brace to hold the straight edge up even in the strong wind.

I started to work on a job recently and found not one of the five straight edges on the job had any such support. I put it on mine and before noon all the others had been fixed the same way and the idea made quite a hit.

ROY F. DE HAVEN, 1222 11th St., Washington, D. C.



Wedge-Shaped Blocks Nailed to the Long Straight Edge Used in Laying Sleepers Will Keep Them from Being Blown Over on a Windy Day.

A Roof Framing Problem

HERE is a sketch and explanation of a problem worthy of consideration. The sketch shows the end view of a house having two gables, the roof being a quarter pitch. To find, with the steel square, the cut X Y in Fig. 1

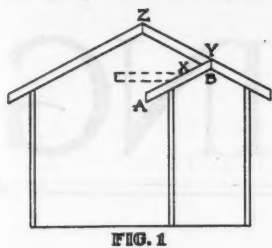


FIG. 1

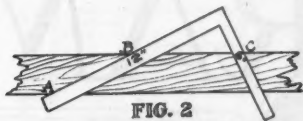


FIG. 2

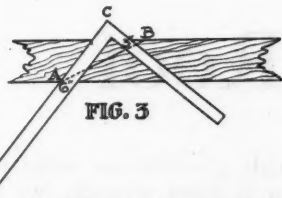


FIG. 3

Here Is Presented a Problem in Roof Framing and Its Solution as Worked Out by One Contributor.

that will fit the verge rafter Z Y on the small roof, giving it the proper pitch, is the problem. Here is how I solved it.

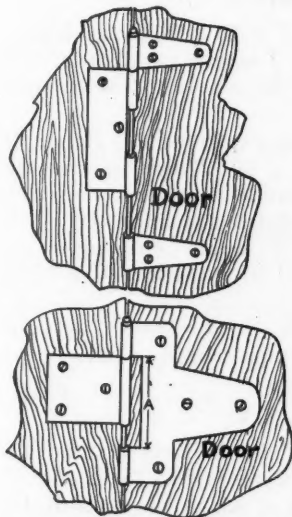
Place the steel square on the timber in the manner shown in Fig. 2 with 12 on the blade and the proper rise of one foot on the tongue, in this case six inches, and mark along A B, six inches, being the rise per foot run of the rafter A B, Fig. 1.

Now suppose the timber in Fig. 2 were cut along A B and placed in position on the small roof. It would be level or parallel to the plate as shown in Fig. 1. It still lacks the proper rise so we need only to find the rise per foot run of the rafter Y Z and apply the square to the first drawn line A B, as shown in Fig. 3, and mark along A C, which will give the desired cut the same pitch, as 12 and 6 inches. If 12 inches and six inches be used, it will be necessary to extend the line A B, Fig. 3. This rule holds good where the rafters A B and Z Y have unequal pitches.

RALPH COX, Ft. Payne, Ala.



Improving Shed Door Hinges



Hinges Modified in This Way Permit Vertical Play and Will Not Be Pulled Off the Shed by Changes in Alignment.

IN building sheds and similar buildings it is well to provide hinges which will allow for changes in alignment from various causes. With firm hinges any change in alignment may tear the hinges from their foundation. The hinge arrangements shown in the sketch will overcome this trouble. The upper sketch is the original method used in building this type of hinge.

To make a single hinge unit two half-butt and half-gate hinges are used. The pins are removed and a new pin is inserted through two halves of the gate hinges and one of the butt halves. The new pin is made longer than the combined length of the three parts so as to allow for

vertical motion. The proportions are shown in the sketch.

In the lower portion of the sketch is shown another type of hinge which takes care of vertical motion. It can be made either with or without the strap portion on the right side.

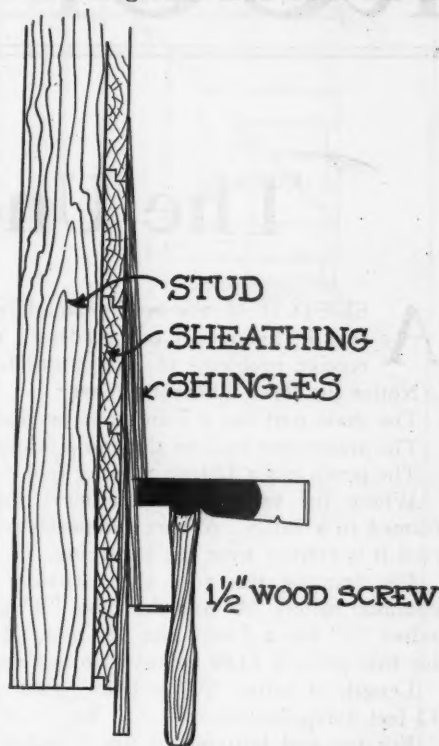
ERWIN C. SCHROETER, 1041 S. Oakley Blvd., Chicago.



Gauging Shingle Exposure

I HAD to shingle a side wall recently and found my hatchet blade had been ground down till it was too

short to use a clamp on as a gauge. To take the place of the clamp I measured down the handle six inches, which was the shingle exposure for the job I was working on, and screwed a 1½-inch wood screw into the handle, I then filed the flange of the screw down till it left the smooth shank and used the hatchet as shown in the sketch. The filing leaves enough slot so the screw may be removed readily. I find this method much faster than the side gauge as the hatchet after gauging is in position for nailing.



One Man Found This Method of Gauging Shingle Exposure Was Handier Than the Blade Gauge.

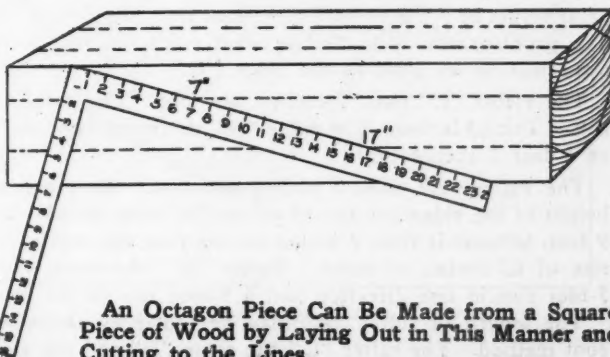
HENRY A. DEWING, P. O. Box 63, Walnut Grove, Cal.



To Lay Out an Octagon

HERE is a simple way to make a square stick into an octagon, or eight-sided, stick. Lay the square on the stick as shown in the sketch and mark the stick at seven inches and at 17 inches. Do this on each side of the stick and draw parallel lines through these marks as indicated by the dotted lines in the sketch. Next connect the lines on the ends of the stick as shown. Now cut the stick down to the dotted lines and you will have a perfect octagon. This will serve for any size of stick which is perfectly square and properly marked.

R. W. Fox, Tioga County, Antrim, Pa.



An Octagon Piece Can Be Made from a Square Piece of Wood by Laying Out in This Manner and Cutting to the Lines.

INSTRUCTIONS *in* ROOF FRAMING



The Uneven Pitched Roof

By JOHN T. NEUFELD

A SKETCH of the roof plan shown in Fig. 1 was sent in by one of our readers. We are pleased to receive problems of this nature for discussion.

Notice the three different pitches:

The main part has a 7-inch rise per foot run.

The transverse roof on the end a 9-inch rise per foot run.

The porch has a 12-inch rise per foot.

Where the two large roofs meet the jack rafters are framed to a valley. Where the porch roof meets the large roof it is framed over the sheathing.

For framing this roof the carpenter would frame the common rafters "A" and the ridge "B" first. The common rafter "A" has a 7-inch rise per foot. The length per foot for this pitch is 13.89 inches (see any roof-framing tables).

Length of rafter "A" is $13.89 \times 12 = 166.68$ inches or 13 feet $10\frac{11}{16}$ inches.

For top and bottom cut use 7 inches and 12 inches on square.

The second step would be to frame the common rafter "C" and the ridge "D."

Rafter "C" has a 9-inch rise per foot run.

The run is 7 feet.

The length per foot run is 15.00 inches (see any roof-framing tables).

Length of rafter "C" is $15.00 \text{ inches} \times 7 = 105$ inches or 8 feet 9 inches.

Deduct for ridge as previously shown.

Top and bottom cuts by using 9 and 12 on square.

The next step would be the framing of the hips "F" and the valleys "E." The hip "F" is an ordinary hip as the two sides are of the same pitch. We will, therefore, not discuss this portion of the roof but devote the space to a discussion of the portions having different pitches.

As the rafter "E" is between two roofs of unequal pitches we must first find the point at which the valley rafter "E" frames to the ridge. If it were an even pitched roof this point would be 7 feet in both directions from the corner "X." The problem now is to find at what point the roof to the right will be as high as the ridge "D."

The rafter "C" rises 9 inches per foot. The total rise is $9 \times 7 = 63$ inches. The ridge "D," therefore, is 63 inches or 5 feet 3 inches high.

The rafter "A" rises 7 inches per foot. To reach the height of the ridge the run of rafter "A" must be $63 \div 7 = 9$ feet, because it rises 7 inches in one foot and has a total rise of 63 inches to make. Rafter "E," therefore, has a 7-foot run in one direction and a 9-foot run in the other.

The length of rafter "E" may be found by the square root method. The rafter "C," the ridge "D" and the valley

rafter "E" form a right triangle of which the valley rafter "E" is the hypotenuse. In a right triangle, we have learned, that the hypotenuse is equal to the square root of the sum of the squares of the other two sides.

In this triangle the one side (ridge "D") is 9 feet or 108 inches. The other side (rafter "C") is 8 feet 9 inches or 105 inches. The length of rafter "E," therefore, is the square root of $108 \text{ squared} + 105 \text{ squared} = \text{square root of } 105 \times 105 + 108 \times 108 = 150.6$ inches. Length of rafter "E," therefore, is 150.6 inches or 12 feet $6\frac{5}{8}$ inches.

This length would be to the center of the ridge and we would have to deduct for $\frac{1}{2}$ the thickness of the ridge; however, if we measure along the longest side of the valley rafter we do not have to deduct for this.

In the next article the problem of making the side cut for the valley rafter will be taken up and illustrated.

Problems

- (1) If rafter "C" had a 10-inch rise per foot, how high would the ridge "D" be?
- (2) What would be the length of rafter "C"?
- (3) At what point along the ridge would rafter "E" come if rafter "C" had a rise of 10 inches per foot run and rafter "A" had a rise of 7 inches per foot run?
- (4) What would be the length of rafter "E"?
- (5) What is the length of rafter "F"?

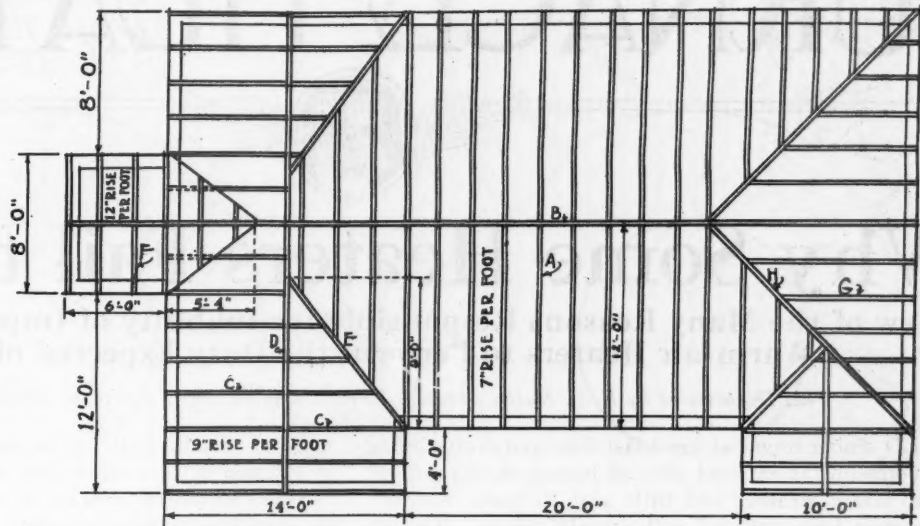
Answers

- (1) The ridge "D" would be $7 \times 10 = 70$ inches high.
- (2) Rafter "C" would have a length per foot of 15.62 inches. The total length is $15.62 \times 7 = 109.34$ inches or 9 feet $1\frac{1}{8}$ inches.
- (3) The total height of the ridge is 70 inches. Rafter "A" rises 7 inches per foot. $70 \div 7 = 10$. Therefore the valley "E" meets the ridge at a point 10 feet from the corner measured horizontally and parallel to the ridge "D."
- (4) The length of the rafter "E" would be the square root of $109.34 \text{ squared} + 120 \text{ squared} = 162.34$ inches or 13 feet $6\frac{5}{16}$ inches.
- (5) Rafter "F" has a 12-foot rise per foot. The length per foot is 16.97 inches. The total length is $16.97 \times 4 = 67.88$ inches or 5 feet $7\frac{7}{8}$ inches.

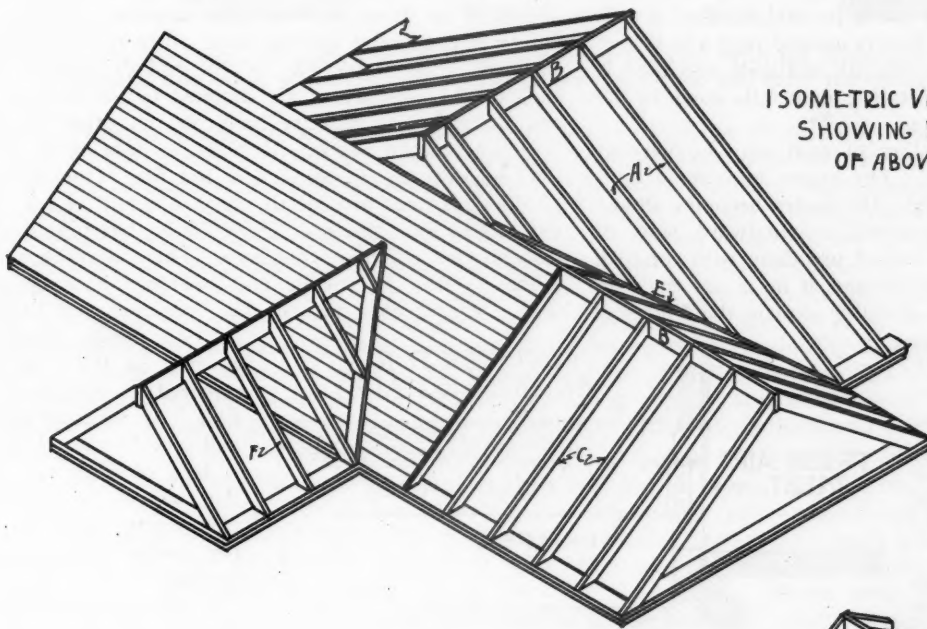


"Estimating Building Costs" by William Arthur, published by the Scientific Book Corporation, 15 E. 26th St., New York City, a new edition of which has recently been brought out is "A concise and handy guide for contractors, building tradesmen, material men, technical students and others interested in the construction of dwellings, barns, stores and industrial buildings of moderate cost." Price \$2.

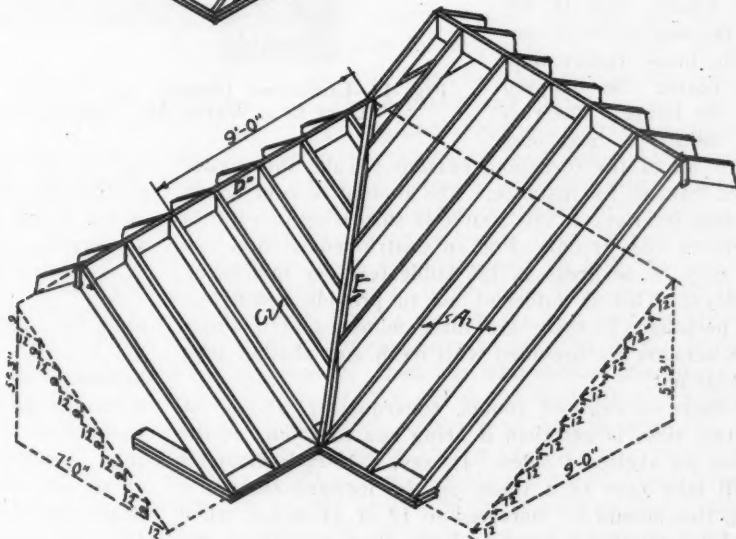
PLAN OF HIP ROOF
WITH DIFFERENT
PITCHES



ISOMETRIC VIEW
SHOWING FRAMING
OF ABOVE ROOF.



FRAMING
The
UNEVEN-PITCHED ROOF



The Method of Solving a Problem of Framing an Uneven Pitched Roof.

FURNACE HEATING



Why Some Heaters Fail to Heat

A Few of the Many Reasons Responsible for Inability of Improperly Installed Warm-air Heaters to Perform the Duty Expected of Them

This Department by R. C. Nason, Heating Expert, appears every month in American Builder.

COLD dining rooms at breakfast time and drafty living rooms on the exposed sides of houses during periods of severe weather add little zest to home comfort, as those who have suffered will eagerly testify. Though a poorly planned and installed heating system may keep an average, modern dwelling warm in mild weather it will not do so when the mercury hovers around zero and below. Then it is one needs all the warmth available and then it is, too, that the improperly installed plant falls down in the crucial, grilling test.

Sometimes constant shoveling of coal may be without avail for no apparent reason. The heater becomes a fuel-hog, the flames leap up the flue, the heater becomes almost red hot, yet rooms on the exposed, or windward, sides of the building are so cold one cannot use them with comfort. The furnace installer is called in and, if he is not the man who put in the plant, he will probably explain the difficulty; that the warm-air ducts to the ailing rooms are too small. Or, it may be that there is no means for the exit of the cold air which enters through window cracks, glass, walls and other points where one would not think it possible for outside cold to come in.

Perhaps the heater has been wrongly placed, that is, located in the mathematical center of the house rather than slightly nearer the exposed sides of the house. The reason for failure to heat may be one or all of the foregoing reasons. Take the matter of inward leakage, for instance. The amount of cold reaching building interiors at this source is surprising in spite of all efforts to keep it out. For an unstripped window the leakage may be as great as 125 cubic feet per minute on windy days. This is sufficient air to provide ventilation for six persons. If there are three windows in a single room 18 persons are provided with fresh air, whether they desire it or not.

Heat ducts to exposed rooms, consequently, should be one or two sizes larger than if being run to rooms of the same size on sheltered sides. If, say, a 10-inch diameter duct will take care of a room on the leeward side of a building, this should be increased to 12 or 14 inches when extended to windward rooms. Even then sometimes the heat will not find its way far from the register because the incoming air pressure blows it back as soon as it leaves the register. When this proves to be the case a cold air register should be installed in the floor near an outside wall. The cold air will then drop into the floor register and allow the heat from the warm air register, usually placed

near an inside wall, to be dissipated through the room and warm it to comfortable temperature.

Some installers remedy a condition like that described by installing a supplementary warm-air register and heat duct. This may give the desired relief, but usually accomplishes it by diverting heat from another room to the ill heated one, thereby leaving some other room insufficiently warmed. The better way is the cold-air register, as this adds to the quantity of air supplied to the furnace casing and increases its capacity and robs no other room.

Of all furnace heating ills there is none more annoying than inability to get up a good, hot fire. Opening the ash pit door may not provide the desired result. Lack of draft, one would say, offhand. Quite likely, but piping and flue leakage is a common condition. There may be a cracked heater section or one or two openings between sections where the furnace cement has loosened and blown out.

These things should be discovered in the summer and repaired at that time if possible. An ordinary flash light will reveal them. If the cause is lack of draft the chimney flue may be too small or the chimney too short. Sometimes the smoke pipe needs overhauling.

It is easy to understand that if there are leaks in the smoke pipe the gases from the fire will find their way out to the basement instead of passing up the flue. Sometimes, the

current will be the other way and the chimney flue, which should suck through the grate, will suck through the leaks in the smoke pipe. Thus the grate does not get enough air current to provide good draft at the fire bed. No amount of coaxing will make the draft go through the fire.

An 8 by 12-inch chimney flue would best be the minimum size and 35 feet the minimum height, with the top not less than 4 feet above the ridge. If there are adjacent buildings or large trees these may affect the draft by diverting the breeze away rather than to, the chimney top. Usually an extra few feet must be added to the chimney then. Insulating the smoke pipe with thick asbestos paper or air-cell asbestos is an excellent precaution against faulty draft from leakage at this point and will pay for its cost in the good results secured. If soft coal is burned it is not infrequently that soot and creosote collect on the interior of the flue and smoke pipe and for this reason a thorough summer cleaning is in order each year.

To secure good heating results one often has to sacrifice beauty to utility. This applies particularly to locating and facing the heater. Instead of placing the plant where

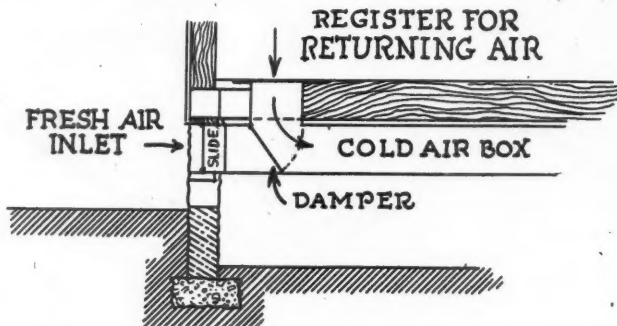


Fig. 1.—Combined Interior and Exterior Air Supply Duct in a Warm Air Heating Plant.

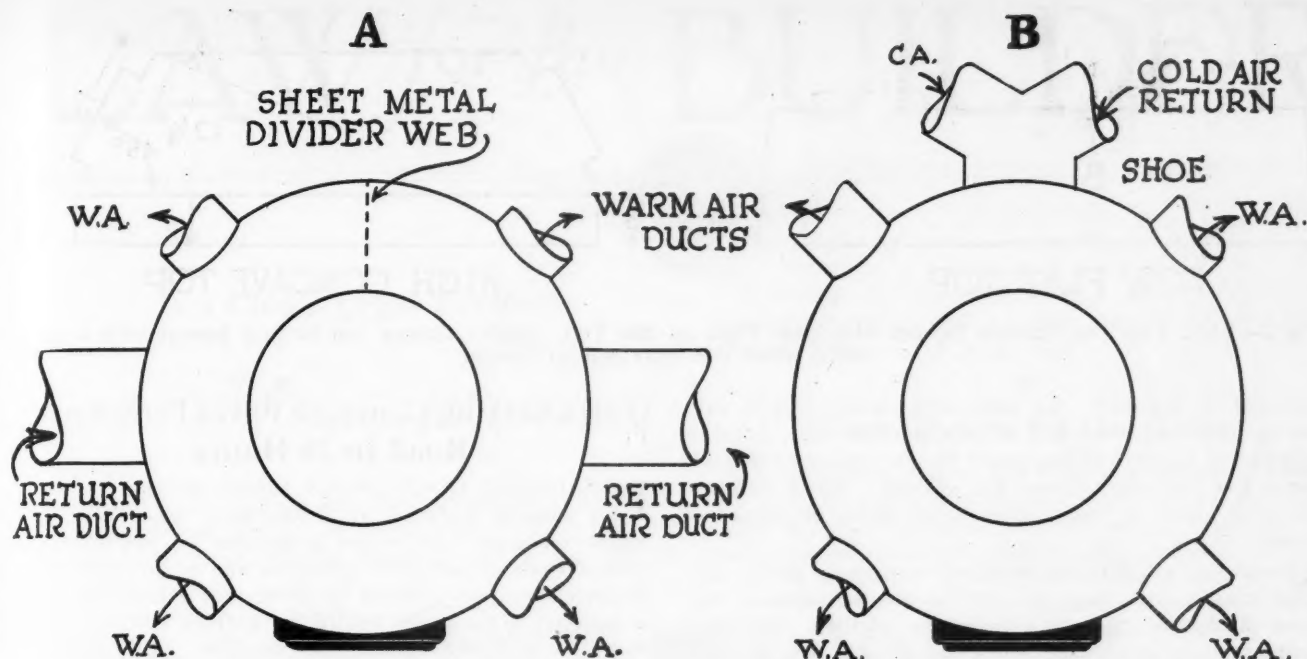


Fig. 2—Left: Return Air Ducts Connected to Opposite Sides of a Furnace, with the Necessary Web at the Back. Right: Preferred method in which the return ducts connect to a shoe and enter the casing at the back.

it may add to the attractiveness of the basement and in the direction in which it is easiest to refuel it, practical persons face their heaters so that as few heat leaders as possible are taken off the front. It should be considered, too, that piping to exposed rooms will provide more heat if they are short and have an upward pitch of at least one inch to the running foot.

Sufficient heat generally will be radiated from the heat leaders and furnace casing to warm the basement. If this becomes overly warm, say, above 65 degrees Fahrenheit, there is probably something about the system which demands correction to secure maximum heating upstairs. Hot basements may come from a variety of reasons, the common one being insufficient air supply to the heater. When the supply is taken entirely from outdoors, obstructed cold air boxes may reduce the supply to a point where the furnace overheats. To prevent this the box would best have an unobstructed area equal to at least 80 per cent that of the combined heat ducts. When the air supply comes in from outdoors and partly from cold air return ducts, care must be exercised that the air current in one duct does not interfere with that in the others.

A well planned combination supply connection is that shown in Fig. 1 from which it is noted there is a swinging damper which may be operated by hand by means of a chain from above to vary the proportion of supply taken from outdoors and from within. An upward pull lifts the damper and notches in the chain race permit fastening the damper at any desired point. In mild weather all outdoor air may be preferred and in cold weather beneficial results will be had by taking all the air supply from within.

Again, many owners prefer to take the entire air supply from inside, and this is coming to be recognized as good practice. An important fact about air supply is that if the supply does not equal the quantity of air which the heater can warm with current fuel rate the circulation is likely to be sluggish and the air overheated when it is supplied to the rooms. Faulty cold air boxes are not the sole cause of hot basements, for many times the difficulty lies in the connection of the cold air return ducts to the heater casing.

Where there are two or more cold air returns and each is connected separately to the furnace casing there is danger

of interference of air flow. Naturally, the duct with the greatest quantity of air and higher rate of flow will force the weaker stream back, slowing up the air current and rendering its effectiveness almost nil. The eddys and cross currents set up within the casing result in uneven heating and unequal temperatures.

It is better practice to connect the cold air returns into a single junction piece, or shoe, before entering the casing, as shown in Fig 2, right. The incorrect method is noted in Fig. 2, left. The area of the shoe must equal the combined area of the ducts leading into it. Likewise, connection of the return-air ducts to the back, rather than to the sides of the heater casing are to be preferred.

When a single cold air shoe cannot be installed but two or more individual returns have to be connected it is suggested that two or more webs be soldered in between the outer casing and ash pit section, extending to the top of the ash pit. These webs prevent interference of the various cold air supply streams and are set in radially. Some installers refer to such pieces as shields or dividers.

Basement space in late years has increased in value with mounting real estate values and better homes. It is here nowadays that one keeps her vacuum cleaner, washing and floor polishing machines and other like appliances, not to say where the laundry is located, hence every effort is made to secure unobstructed headroom. For this reason it has become common to box in spaces between joists and use them as ducts for conveyance of both warm and cold air supply. If this is to be done it is essential that the openings be entirely closed in the best manner known and care exercised almost as great as putting on a cylinder head on an automobile. Installers who enclose joist areas simply by nailing sheets of metal to the bottoms of the joists are not performing their contract as well as they can. Nails come loose due to seasoning of lumber, constant jarring above and other causes with the result cases have been observed by the author where a person could thrust his hand between the bottom of the joist and the sheet metal.

If joist spaces are to be used as warm air supply it is apparent that the warmth immediately passes into the cellar rather than into the rooms above when crevices exist and, if spaces are employed as cold-air ducts, suction within the furnace pulls the air from the cellar rather than through

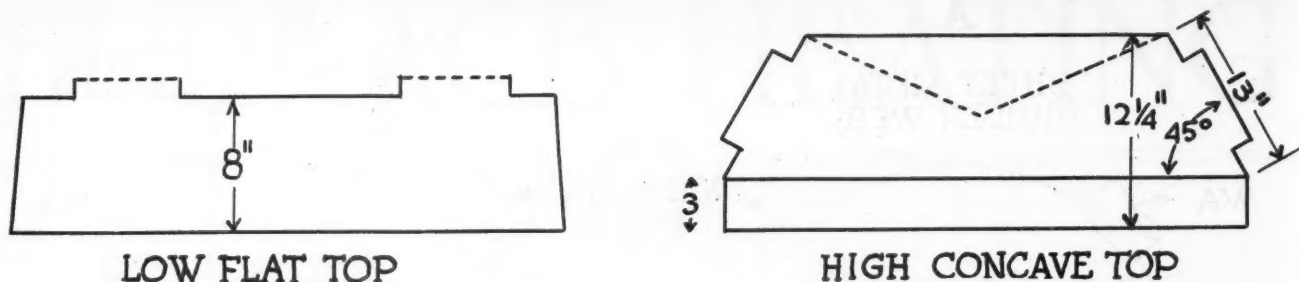


Fig. 3—Left: Flat Top Furnace Bonnet with Heat Pipes on the Top. Right: Conical top furnace bonnet with sloping sides, which is a more popular design.

the cold air registers. To make tight spaces, where only the bottoms are covered, it is recommended that strips of asbestos or heavy building paper be laid between the sheet metal and the joist bottoms like gaskets. Better still, use the joist areas to insert sheet metal ducts of regulation design.

Boxing-in of joists for economy sometimes proves disappointing as the roughness of the interior surfaces may cause heat loss and back pressure by friction. If regular bright tin or galvanized sheet steel ducts are fastened within the spacings they may be rectangular, if mechanical fans are used, and round, if gravity flow. The cost of repairing the boxed-in joist areas when metal loosens, cost of gaskets and interference with air flow when leaky makes it doubtful if in the long run saving is effected.

Too little attention often is paid to design and construction of bonnets, or heater tops. Some installers feel that they get better results with certain shapes and others favor other kinds. The average installer makes them about as grandad did, when the manufacturers do not supply tops with their heaters.

Briefly, bonnets are classified into those with flat tops and straight sides with pipes coming off the top and designs having sloping sides and inverted conical tops, with pipes being attached to the side. These are shown in Fig. 3. With either type plenty of headroom is desirable but, if there is not at least 4 feet, the flat top with top pipes is not recommended, whereas the conical bonnets with side outlets may be installed with safety. When heat leaders connect to the top of the bonnet it is obvious that two 90 degree piping bends are necessary before the warmth reaches the first-floor registers and wall stacks. It is largely for this reason that conical bonnets have become more common, as with them only one, a 45 degree bend, is needed.

In actual use, heat rises from the heater radiator, strikes the sloping sides of a conical bonnet and receives a good impetus to carry the heat along the upwardly pitched basement leaders to the registers and stacks. The side of the bonnet faces in the correct direction to give the leaders proper pitch. With flat top bonnets the impetus which the heat receives at the outset is lost before the registers are reached.

Another common cause of heating failure is the installation of furnaces which are too small to perform the duty expected of them. The safest way to prevent this is to estimate the sizes of heat ducts required for each room by the heat transmission method of calculation recommended by the Standard Code of the National Warm Air Heating and Ventilation Association. Add from 10 to 25 per cent for exposure and safety and select a heater having free casing area equal to the combined area of all heat ducts. It is not an unsound plan at all to select the next size larger heater than is estimated as actually being necessary. The surplus capacity will prove economical over a 10-year period in freedom from repairs and lower fuel requirement to secure normal heating result.

Quick Setting Concrete Paves President's Road in 20 Hours

PRESIDENT COOLIDGE'S sudden decision to spend his summer vacation at Brule, Wis., gave Wisconsin highway engineers an urgent assignment to "put the roads around Brule in first-class condition and to do it quickly." Because they were pressed for time, they established what is believed to be a new record for opening concrete pavements to traffic by opening the pavement within 20 hours after the last concrete had been laid.

U. S. highway No. 2 between Brule, the summer "white house," and Superior, where the President maintains executive offices, was particularly ordered for speedy repairs because this road would bear the heaviest traffic.

An unpaved strip near Amnicon Falls, just beyond the end of concrete pavement placed last fall, was in bad condition. W. C. Buetow, chief highway engineer of Wisconsin, decided to use high-early-strength concrete rather than a temporary surfacing.

The decision to use high-early-strength concrete was made at 9 o'clock in the evening of June 4. By 7:00 the next morning state engineers had staked out the project and forms were set by noon. At 9:00 that night the last of the concrete was placed and the next afternoon at 5:00, just 20 hours after placing the concrete, the road was opened to traffic. Laboratory tests showed concrete having a compressive strength of over 2000 pounds per square inch in 20 hours, a strength usually obtained in two or three weeks.

Col. E. W. Starling, representative for the White House; W. C. Buetow, J. R. McLean, H. F. Holmes and Roy Risberg, all of the State Highway Department, and George F. Mork, field engineer for the Universal Portland Cement Company, were associated in planning and executing the work, which was done by A. N. Nelson, contractor, Duluth.



End Matching Makes Progress

SPeAKING to the recent annual meeting of the Southern Pine Association, E. C. Gates, of the End Matched Bureau, outlined its development. He said:

"As stated in the by-laws of the bureau, membership is open to any Southern Pine manufacturer end matching or planning to end match all or any part of its pine product. The objects and purposes of the bureau are: to standardize manufacturing practices in end matched products. To effect proper methods of distribution of end matched products. To effect group advertising and sales extension; to collect, compile and disseminate information as to end matched products, and to acquaint the public with their utility and economy."

"At the present time, unless there has been an addition within the past week, there are 18 reputable Southern Pine mills end matching, while a great many others should be and we hope will be before the year is out."

LAW *for the* BUILDER



Is a Check Legal Tender?

"YOU owe me \$600," the wholesaler averred.

"Four hundred dollars is the correct amount," the builder retorted, and placed a check for that amount on the wholesaler's desk. "I'm willing to pay what I legally owe you, but not a cent more, and I'm making a tender to you right now."

"I'll not accept a cent less than the \$600 that you owe me, and you can 'tender' till you're black in the face," the wholesaler retorted, handed back the check, the builder departed, and, inside of twenty-four hours, the wholesaler sued for \$600.

"Four hundred dollars is all we owe, and my client tendered that amount before the suit was brought," the builder's lawyer contended, when the case came to trial.

"No legal tender was ever made to us," the wholesaler's attorney retorted, "for a check is not legal tender. A tender can only be made by offering the actual cash."

"I'll admit that, for the sake of argument," the builder's lawyer retorted, "but, in order to get the benefit of the objection, the creditor must object to the form of the tender, at the time it is made. A creditor cannot object to a tender by check without raising the point and then get the benefit of it on the trial."

"It is also objected that the tender of certified checks is not a valid legal tender within the meaning of the law. It is true it is not a legal tender in money, but it has been frequently held that objection to the medium in which the tender is made may be waived. If no objection is made on the ground that it is not lawful money, a certificate of deposit is a sufficient tender. So, too, if a check be tendered by a debtor who has sufficient money in bank to pay it, and the creditor refuses to receive it for some other reason, but not because it is a check, the tender is valid," said the Pennsylvania Supreme Court, in ruling in the builder's favor, and the general weight of authority in the American courts is to the same effect.



Does the Greater Include the Less?

THE seller had agreed to sell a certain quantity of goods, shipped about 60 per cent more than the order called for, the goods were seized in transit by government inspectors, and the buyer sued in the New York courts for the return of his money.

"The title passed to you, so you can fight it out with Uncle Sam," the seller told him.

"Not when you shipped more than my order called for," the buyer retorted, and the New York Court of Appeals ruled in his favor in 147 N. E., 1544.



Two Checks for One Debt

AN Oklahoma Builder had bought a carload of cement, paid the dealer by check, the check was lost, the builder issued a duplicate check, and the word "duplicate" was written in red ink on the face of new check.

A few days later the duplicate check was paid by the local bank on which it was drawn, the original check, purporting to be endorsed by the cement dealer and B, was cashed by X at the Popular bank, the Popular Bank presented the check to the local bank, and, through an oversight, the check was paid. Then the local bank discovered that it had paid the same check twice, and that the dealer's endorsement on the first check was a forgery.

"You've got to make good to me, and sue the other bank, if you like," the builder declared, the local bank then sued the Popular Bank, and the Oklahoma Supreme Court ruled that the local bank had no case, on account of its carelessness in paying the first check.

"Under the testimony offered, it is shown that, in banking circles the marking of a check as a duplicate has the effect of serving notice upon the drawee bank that an original of said instrument has been executed, and not to honor both payments. In this case, the duplicate check was paid on March 7th, only one week before the original check was presented and paid, and it was the duty of the drawee bank to have taken notice of the duplicate check, and not paid the original when it was presented thereafter on March 15th. If the original check had been received first by the drawee bank, could it be said, upon the presentation of the duplicate check thereafter, that the said drawee bank would not have to take notice of the fact that it had already paid the original? If it paid the duplicate under such circumstances, would it not do so at its peril?"

The issuance of duplicate checks is a practice in the commercial world, but of what advantage is it and what protection has a depositor if the drawee bank may ignore the notice given it, when the depositor marks his check 'duplicate' and thereby indicates to the drawee bank that another check for the same amount has been issued by the depositor, and not to honor both instruments, if it is not bound by the notice imported by the duplicate check?" was the reasoning of the court.

M. L. HAYWARD.



A New Contribution to Home Comfort

"A Home Without a Fireplace Seems a Home Without a Soul"

A FIREPLACE is an essential in every home. More than any other feature of design, more than any other item of interior equipment, it creates the genuine home atmosphere.

It is truly the symbol of comfort. Around it the family life is lived. In the pleasant glow of the fireplace the children play their games and learn their lessons during the long winter evenings. And when Christmas comes expectant stockings fringe its mantel as Kris Kringle thrusts his merry face through its mysterious portals.

A home can never be truly a home without a fireplace. Unfortunately, fireplaces have been a considerable luxury. The high cost of ash pit foundations, expensive brick work and other items have eliminated the fireplace from thousands of houses. Reluctantly the home builder has been obliged to omit this desirable feature from his plans.

But now this important problem has been solved, and solved more completely and effectively than any one had ever anticipated. A gas-burning grate has been developed and is rapidly being taken up by builders which is something far more than an inexpensive fireplace. It is a unique development that comprises a complete fireplace so adaptable that it can be installed in any room, wherever there is wall space with flue connection available, and provides glowing heat at the touch of a match. All these advantages are combined in one installation at a minimum price.

A successful building firm of Long Island City, N. Y.—O'Brien & Walsh, Inc.—are one of the alert merchant-builders to take up this home improvement and make sales capital of it. In a circular describing a group of

their houses on Sixteenth Avenue, Astoria, Long Island, they list the various construction and equipment features. Referring to the room heaters they say:

"In the living room a decorative mantel piece has been installed which is equipped with a 'Radiantfire' gas heater. There are many days during the spring, fall and winter when the necessity of operating the steam plant can be eliminated on account of this gas heater, which provides sufficient heat to remove the chill from the house. This gas heater will prove a great economy in coal saving, as well as eliminating the trouble of running the furnace. The owners will also derive the pleasure of sitting comfortably in front of a warm attractive fire without any dirt or trouble. It is our opinion that this heater will provide sufficient heat so that the steam plant will have to be operated only during the severe months of mid-winter."

The accompanying illustrations show the two finishes available for the wooden mantel—one in three priming coats of flat white ready to receive the final coat of enamel that will match it to the woodwork in the home; the other in dark brown mahogany. The latter should be your choice if you do not intend to match it to your painted woodwork.

Both mantels are made of the finest selected woods and are shipped complete ready for installation.

The entire Radiantfire and front panel facing are made throughout of a rustless steel and in an armor bright finish. These metal parts are free from any electro plated finish or lacquer, therefore will not scratch, stain or tarnish.

Any metal polish will keep this front in its original spotless condition.

The upper panel of Radiantfire front is removable so the flue connection is accessible. The hearth is also removable, exposing the burner for connection or cleaning.

To install, all you need supply is the necessary gas piping and a simple ventilating flue. Simple means are provided to fasten the mantel securely to the wall and anyone can do this work, no skilled labor is required, no tiling is necessary. See installation views on the next page.

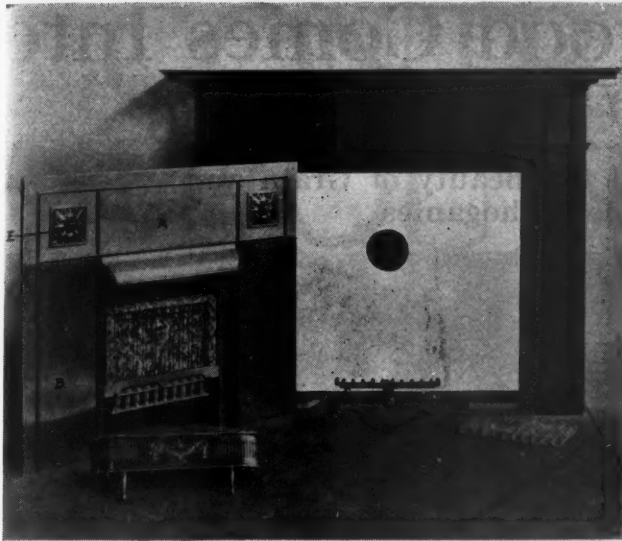
Can also be installed where no flue connection is available.

For these reasons it is believed that this new Radiantfire with mantel is one of the most important contributions yet made to the advancing art of home building. Every builder, architect or householder should learn the facts regarding this new development that is destined to exert a profound influence on the design and construction of American homes.

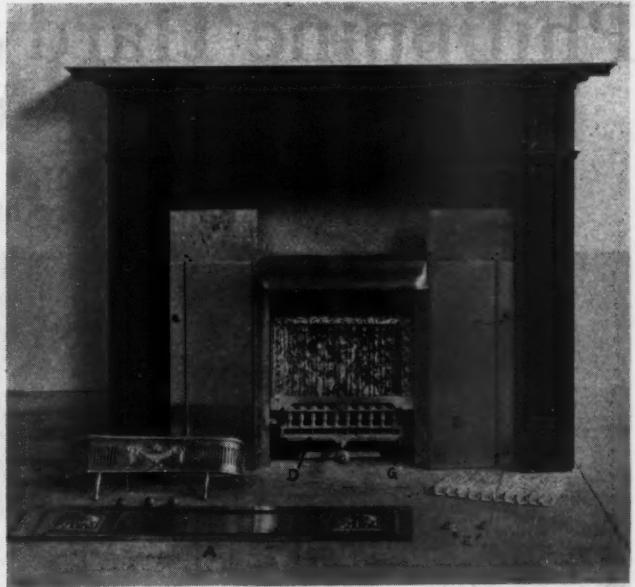
The Editor of the What's New Department, AMERICAN BUILDER, 1901 Prairie Ave., Chicago, has a quantity of very interesting information on this subject which he will gladly send free to any reader who will write him.



Photo of the Completely Assembled and Installed Radiantfire-Mantel. The mantel is finished in three priming coats of flat white, ready for final finish coat to match trim, the Radiantfire and front panel is armor bright.



Installation Is Very Simple. The mantel is fastened securely to the wall by the use of two turn buckles attached. If a flue is provided, the 6-inch vent opening should be located 21 inches from the floor to the center of opening. However, good ventilation can be secured without flue connection at very small expense.



Illustrating Method of Installing Sheet Metal Front After Mantle Has Been Secured to the Wall, Vent Opening Provided and Burner Connected.

Remodeling Campaign Making Headway

THIRTY cities, located from coast to coast, within the last month inaugurated campaigns destined to rehabilitate thousands of decrepit homes and these campaigns have stimulated business and have been important factors in stabilizing labor conditions.

This announcement was made by Walter J. Kohler, chairman of the Home Modernizing Bureau, Builders' Building, Chicago, which is composed of competitive but co-operating interests in the construction and allied fields. The bureau was launched recently by trade associations for the purpose of encouraging remodeling and raising the standard of structures now standing.

"The immediate response to our national program leads us to feel that the modernization movement will prove one of the greatest economic measures developed since the war," asserted Mr. Kohler.

"In Topeka, Kan., for example, 90 per cent of the members of the building industry joined in setting up a permanent modernization committee.

"Fifty structures, homes, stores and other type of buildings, are now being modernized, and where thirty days ago there was a surplus of building labor, today there is even a slightly healthy employment situation.

"Business in building supply lines is also reported considerably stimulated, and the financial and civic organizations are vigorously backing the movement.

"Recently at Kansas City fifteen of the leading interests met and perfected preliminary organizations for an extensive modernization campaign.

"In Omaha the building and loan association, seeking new capital, realized that the man of modest means would modernize his home on the installment plan if he were informed how easily this could be arranged."

Mr. Kohler said the Minneapolis Electrical League and the Builders' Bureau of the Retail Lumber Dealers' Association called in the paint and wall paper dealers, the plumbing contractors, and real estate men and decided to launch a home modernization campaign.

"Other cities in which activity is now under way or planned for the near future," said Mr. Kohler, "include New York City; Buffalo; Spencer, Iowa; Little Rock; Philadelphia; Springfield, Ill.; Florence, Ala.; Bloomington, Ill.; Los Angeles; San Diego; Decatur, Ill., and Washington, D. C.

"Practically unlimited funds are available to finance modernization by home owners, and consequently stimulation of new construction, which will logically follow, will develop outlets for millions of capital now seeking employment."

Mr. Kohler said it is interesting to note that in practically every city where local programs are now under way different interests have started the work. He asserted this shows there is a general acceptance of the need to make a drive on this market. He pointed out that modernization of homes not only restores the original value but changes the property value from a frozen to a liquid asset.



Smoothing Out the Spring and Fall Peaks

(Continued from page 91)

part, as did the decorators' associations and labor unions.

Tenants were circularized and it was pointed out to all concerned that here was a reform which would work a benefit for both tenants and property owners. A survey is now being conducted which is expected to reveal the exact number of leases changed this spring so they will expire out of the old period. Early indications are that it will exceed the fondest hopes of the council members.

If the present ratio is continued, more than thirteen thousand leases have been changed by real estate men alone and only about 50 per cent of the apartments in the city are handled by renting firms.

The council does not expect to accomplish the breaking down of a forty-year-old custom in a few days. A two or three-year campaign is planned. With the elimination of the renting peaks, it is the belief of this organization that the peaks in the building industry will be alleviated.

Philippine Hardwood Comes Into New Favor With Builders

This Handsome Wood Has All the Beauty of Grain and Color of Any of the Mahoganies



Loading the Large Philippine Hardwood Logs in the Forests of the Philippine Islands. These logs are hauled first to a railroad and then to the mills or rivers.

WITHIN the past few years Philippine hardwood, (sometimes known as Philippine mahogany), has come rapidly into favor with the builder as an interior finish lumber. In its rich red color and satin beauty of grain, it rivals the native mahogany of Central America. At the same time, its cost is only about half that of the other mahoganies, so that it is now being imported in large quantities for use in the cabinet work and panelling in ships, banks, public buildings, libraries, luxurious office suites and private dwellings.

Philippine hardwood offers a rich finish. Doors, mouldings, panelling, all forms of cabinet work, are beautiful and effective in this material. The use of plywood panelling, particularly, has brought Philippine hardwood into favor in the building of homes. Richly beautiful, but at once economical, this wood is well adapted to the finishing of the model house, where the decorative treatment must attract the buyer's attention. When once the house has been furnished, the mellow tones of the panelling will harmonize with the soft gold of brocatelle curtains and the blues and greens of an oriental rug in a manner especially pleasing. Prospective buyers who have been inspecting such a model house are often led to investigate its cost and specify Philippine hardwood in the homes they, themselves, purchase.

Most of the Philippine hardwood which is imported into this country comes from the Dipterocarpaceae or Lauan family. There are a number of different species included in this group which have often been roughly classified by the trade as Philippine mahogany. The Lauan family is by far the most important family of hardwoods in the

Philippine Islands. It embraces about 75 per cent of the present stand of timber and has a wider range of uses than wood of any other family. Some of the trees grow to great size. It is not uncommon to find trees of five to six feet in diameter.

The collection of these woods for commerce is often a laborious process, undertaken by the natives. It sometimes involves the construction of a road through a dense forest and in a most difficult country, upon which the wood must be drawn to the nearest watercourse or sawmill. Here the logs are sawed, sometimes in very wide boards, with some shipments averaging 10 inches and wider, with excellent lengths from eight to 20 feet. A common practice now is to ship the Philippine hardwood logs as a deck load on vessels to America, where they are sawed to the particular grain and dimension needed. The lumber is sawn both quarter-sawed in (rift) grain and slash (plain). The quarter-sawed stock is known as ribbon figure and has on the face that narrow ribbon figure so desired in mahogany.

The two distinct divisions are red and white stocks of Philippine hardwood, or light red and dark red stocks, as they are sometimes called. The light red stock is particularly adapted for staining brown or walnut shades and can also be stained an excellent mahogany finish. While the dark red can also be stained brown, it is particularly adapted for a beautiful mahogany finish.

In the past, considerable of the so-called Philippine mahogany, that has been marketed in this country, has contained many small pin worm holes. This has been an

(Continued to page 125)

CONTRACTORS' EQUIPMENT



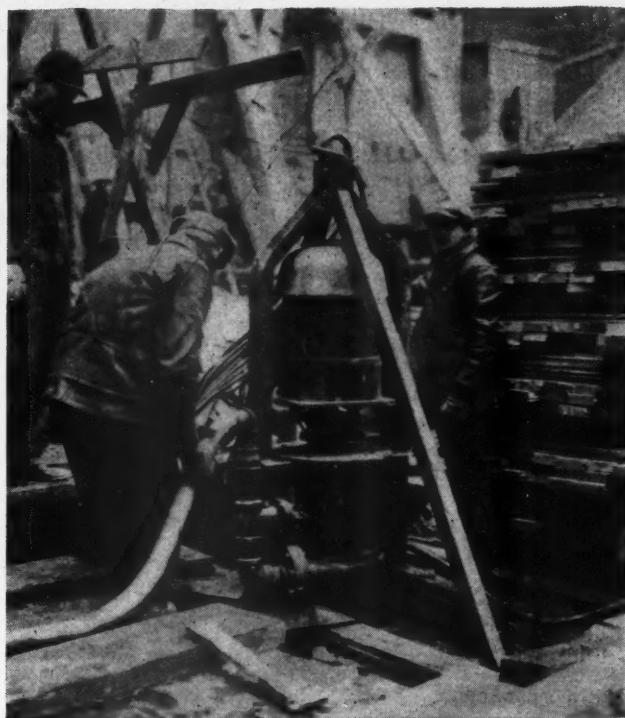
The Drainage of Caisson Holes by "The Chicago Method"

A GREAT deal of interest has been aroused in the rapid and economical sinking of caissons by what is known as "The Chicago Method." An important feature of "The Chicago Method" is the drainage of the holes during the process of sinking the caisson, a feature which has been highly developed because of the conditions which are met in carrying on this work.

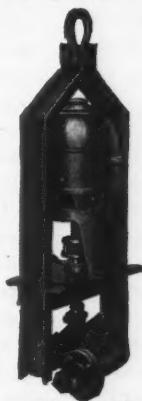
In the building areas in the lake regions, of which the Chicago district is an outstanding example, a great deal of water is encountered. This makes the sinking of the hole exceedingly difficult unless adequate provisions are made for drainage. The pumps used for this work are generally three inch, centrifugal pumps of a special design, driven by 10 horsepower, vertical motors.

These pumps operate with a suction lift of from 12 feet to 15 feet even though handling a very large percentage of sand and clay with the water. They usually have capacities of 150 to 200 gallons per minute. In extreme cases, where the depth exceeds 100 feet, two or more pumps are placed in series in the same hole. Usually there is not much infiltration of water in the upper clay, but the pumping problem becomes very serious at the lower levels. It is, therefore, essential that the pumping equipment be absolutely reliable at all times.

In the solution of the caisson drainage problem, the Economy Pumping Machinery Company, at 3431 West Forty-eighth Place, Chicago, has done pioneering work which has led to the development of a special type of pump for this purpose. This unit, which is shown in operation in the accompanying photograph and in more detail in the



A Specially Designed Pump Widely Used in the Drainage of Caisson Holes Where "The Chicago Method" Is Used Features Reliability and Accessibility. Below: A more detailed view of the pump shown above.



Close-Up Showing Construction of Drainage Pump.

smaller illustration, is of a particularly rugged design, mounted in a channel frame so that it may be skidded easily and suspended during construction work. This company has specialized on caisson pumps for eight years and its equipment has been used on such prominent projects as the Chicago Union Station, New State Line Generating Plant, Strauss Building, Daily News Building, Builders' Building, Mather Tower, Lawyers' Building and many others.

One feature of these pumps which has led to their very general adoption, where "The Chicago Method" of sinking caissons is used, is their accessibility and the fact that the shaft, impellers, bearings and other parts can be renewed quickly, easily and economically. The manufacturers will be glad to furnish data, upon application, concerning the drainage of caisson holes

and also upon other pumping problems.



Philippine Hardwood

(Continued from page 124)

objectionable feature. It is now possible to get this material free from worm holes, as the better material is being cut from the uplands in the islands where the trees are not attacked by these small worms.

Among the largest importers and manufacturers of Philippine hardwood for panels, moulding, trim, lumber and doors in America is the Wheeler, Osgood Company, of Tacoma, Washington, which is successfully marketing this material in its various forms. This company has experimented for some time with Philippine hardwoods; and it has developed the best and most economical methods.

WHAT'S NEW?



EDITOR'S NOTE: *The AMERICAN BUILDER does not accept payment in any form for what appears in our reading pages. In order to avoid any appearance of doing so, we omit the name of the maker or seller of any article we describe. This information is, however, kept on file and will be mailed to anyone interested; address AMERICAN BUILDER Information Exchange, 1827 Prairie Ave., Chicago, Ill.*

Collapsible Steel Horses

WOULD you pay a man good wages and then hamper his working? Not if you knew it. Yet unhandy and inconvenient equipment does hamper the work of your men. The collapsible steel horses and trestles, illustrated, are a type of equipment which is replacing the old-fashioned wooden horse and trestle and replacing it with equipment which is far more handy and convenient, thereby facilitating



Steel Trestles, Like This, Are Collapsible for Transporting or Storing and Can Be Adjusted to Varying Heights.

work that was hampered by the older and poorer equipment.

This equipment is of two types, the steel horse and the steel trestle. The former is of a fixed height, the latter adjustable in height. The horses come in four sizes, two feet high by three feet wide, three feet by eight feet, 4½ feet by five feet and five feet by five feet. They range in weight from 18 pounds to 64 pounds according to size.

The trestles come in two sizes, three feet high by five feet wide and four feet high by five feet wide. The first has an adjustment to increase its height to five feet by three inches at a time, making eight different heights. The second has a three foot rise, three inches at a time, making 12 available heights.

All these are made of high grade steel throughout with no loose parts. They are absolutely safe and fireproof, will carry a load of 2,000 pounds and are said to outlast 10 wooden horses. They fold up into a small space for storage or transportation. One hundred and fifty of them can be transported at a time in an ordinary stack truck or stored in an eight by 10-foot shed. This means economy

in both transportation and storage as well as in handling on the job. The safety of this equipment also means confidence on the part of workmen and no fear of mishap.

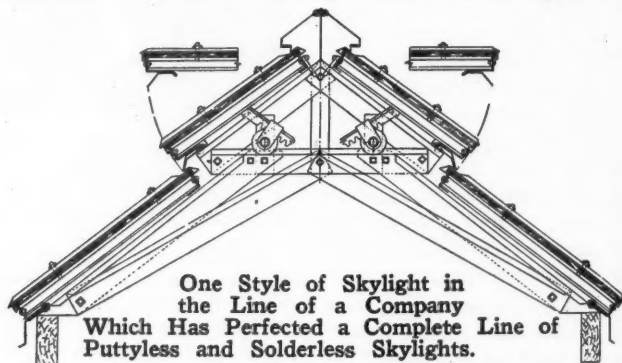


Solderless, Puttyless Skylights

THROUGH years of experience in the manufacture of skylights, a certain company has perfected a line of skylights which are both solderless and puttyless and of a design and construction which is highly resistant to fire, and proof against leakage and caving. These skylights include both ventilating and non-ventilating models, four different styles being included and any desired size produced. One style is designed for sawtooth construction.

The accompanying illustration shows the construction of the most commonly used style in this line and a description of this style can be taken as typical of the whole line. The pitch of this skylight is nine inches to the foot. The trusses are built of 16-gauge, copper bearing, galvanized iron, "T" shape, well supported and bolted with ¾ and ½-inch machine bolts. They are spaced as required and properly attached to the curb, may be of either wood, concrete or gypsum tile. A truss is provided on each end of the skylight.

All the flashings are of 18-gauge, copper bearing, galvanized iron. The center flashing is bolted to the upper and

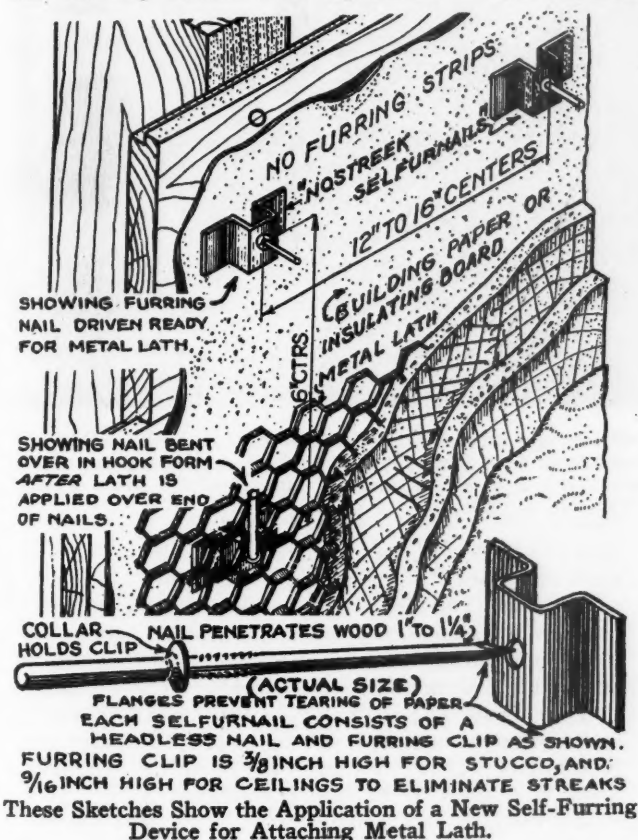


lower trusses with four ¼-inch bolts to each truss. The lower flashing has two bolts to each truss and is properly fastened to the curbing. The upper flashing is bolted to puttyless bars. Condensation gutters of 18-gauge copper bearing galvanized iron, three inches wide, are leakproof and have the proper opening for condensation. A ridge of the same material is well braced and fastened to the skylight. The ends are of the same material in 20 gauge and are fastened to the truss. The glass is ¼ inch thick, wire-ribbed. The caps are 20 gauge, fitted flush to the glass, and fastened with brass bolts. Malleable fork hinges, ¾ inch thick, are used. Chain or handle operator can be supplied. With this style the opening for ventilation is one-third the width and the full length of the skylight—that is, a skylight 12 by 40 feet gives an opening 4 by 40 feet, or a total of 1,600 square feet. Where greater ventilation is required, it is provided by the use of one of the other styles.

Self-Furring Device for Metal Lath

BECAUSE of the great increase in use of portland cement stucco for exteriors and plastering on metal lath in interiors of buildings of every description, architects and builders will be especially interested in a new self-furring nail used with metal lath. It is said to be the first practical device for furring of small-mesh lath that has ever been put on the market. Its uniqueness consists in its being a duplex nail without a head in combination with a metal furring clip through which it is driven over insulating board or building paper into the sheathing before the lath is applied. A collar on the nail holds the clip firmly to the support so that it can be applied on soffits as well as vertical surfaces.

Over the projecting ends of the nails, of which a sufficient number are driven in turn for several yards of lath, the lath is hooked, pushed down to furring clips, and the ends of the nails then bent over to hold the lath to the support a fixed distance from the backing, determined by the height of the clip, which is $\frac{3}{8}$ of an inch. This height was carefully chosen after experiment so that no more



nor less than the correct amount of stucco is required to go through the lath, touch the backing, and then mushroom out so that the back side of the metal lath is fully protected against deterioration and the lath automatically placed in the center of the stucco slab.

Cracks due to warping or swelling of wood furring strips are entirely eliminated, as no wood whatever comes in contact with the stucco. This device also assures a uniform stucco key under the entire stucco slab, $\frac{3}{8}$ of an inch over supports, $\frac{3}{8}$ inch between. Cracks due to inadequate thickness because keys are not possible over furring strips, which are usually placed 12 and 16 inches on centers, are entirely eliminated. The new nails, being without large heads, are easier to drive than ordinary nails or staples. Substantial flanges on the clip prevents cutting the building paper or insulating lumber.

Used on interior plastering, this new self-furring device makes streakless ceiling possible without resorting to expensive furring channels. For this purpose the clip is $\frac{5}{16}$ of an

inch high, being used on the under side of joists to fur metal lath away from them. This assures that no part of the plaster passing through the lath will touch the joists, provides full plaster keys under the joists and air circulation behind the plaster. Thus streakless ceilings, with neither lath streaks nor joist streaks, are now within reach of the average owner's pocketbook.

The nails are inexpensive, being cheaper than wood furring strips on the outside of a building and much less than furring bars on ceilings, it is stated. When used on ceilings they save their cost many times over because of the elimination of redecoration such as is necessary when metal lath which is nailed directly to the joists.



An Improved Spiral Plug Cutter

ILLUSTRATED here is an improved, spiral, plug cutter which is described as the best and most practical plug cutter this manufacturer has ever produced. It is made with several spiral cutters, allowing sufficient room for easy clearance of chips, eliminating choking, binding and heating, which makes for easy working.

This tool is especially adapted to cutting plugs in cross-grain wood, used for plugging holes, so that when the wood is finished the grain will all run in the



This New Spiral Plug Cutter Is Described by the Makers as the Most Practical They Have Produced.

same direction and the plug will not be seen. It is made in all sizes listed and is suitable for cutting plugs in all kinds of wood, such as poplar, oak, hard maple, walnut and mahogany. It is used in any ordinary boring machine. This cutter is extensively used in the manufacture of chairs, tables and furniture of all kinds and in all work where plugs are used for filling holes where screws are countersunk. It is also used, in the larger sizes, for boring out and plugging up defects in lumber.



Hammer Line Is Improved

A NUMBER of new features have been incorporated in a well-known line of hammers. The hammer shown in the illustration is so designed and constructed as to give perfect balance, along with strength, safety and economy. Added strength is obtained by inserting a special analysis steel rod between two halves of the dovetailed, hickory handle, the rod locking the head to the handle and eliminating any chance of the head flying off. It is said that mechanics find this feature a great improvement in hammer construction.



A Steel Rod Is Inserted Between the Dovetailed Halves of the Hammer Handle, Locking the Head and Reinforcing the Handle.

Only stout, second growth, white hickory is used in the handles. Their two parts, double dovetailed through their entire length with the grain opposed, are set with casein glue under powerful pressure. Neither heat, water nor weather can affect it, according to the manufacturer.

The head is made of special analysis, chrome steel. Additional toughness is obtained by a heat treatment in oil and the head is drop forged with a final-shaping blow of 2,000 pounds.

Electric Refrigeration Specially Designed for Apartment Buildings

REFRIGERATION for the apartment kitchen has always been a problem. The difficulties of ice delivery and drainage together with the strict limitation of space available have been obstacles which have stood in the way of satisfactory solution of the problem by the employment of the familiar ice box. These obstacles have, however, been entirely eliminated with the introduction of electric refrigeration. Now comes an electric refrigerator which has been especially designed for apartment use.

The manufacturers of this unit set out to develop a refrigerator for apartment installation which would easily fit into the small apartment kitchen, which would be trouble-proof, quiet, economical and, above all, would give perfect refrigeration day after day and year after year without need of servicing or mechanical attention of any kind on the part of the owner or tenant. This new unit is completely independent of pipes drains or attachments with the exception of a single electric cord which is plugged into an electric outlet just as is done with the vacuum cleaner or electric fan.

The first step in the development of this unit was an investigation to determine just what size and type of refrigerator was needed for apartment service. The small model shown in the photograph was finally decided upon and was equipped with the same efficient icing unit which this company uses on its other models and which is already well known. Apartment house refrigeration presents a special problem, in addition to those at first mentioned, in that the conditions are more exacting than they are in the average home. Such a refrigerator must be built to stand up under the hard usage given by different tenants, many of whom are likely to be careless with things which are not their own property. It must be quiet in operation because of the close grouping of the units and the proximity of kitchen units to sleeping and living rooms of other apartments. It must conserve floor space which is of high rental value and is strictly limited, especially in the modern small apartment. Finally it must require no mechanical attention. This new unit meets all of these requirements. In addition it is sanitary, easy to clean and attractive in appearance.

The construction of this company's refrigerators is such that, even in this small unit, there is a comparatively large food storage capacity. All of the mechanism, with the exception of the evaporator, is mounted on the top of the unit, leaving the interior largely free for food.

Locating the machine on top of the box has made it possible to eliminate all service valves and pipe joints. The machine, being a complete unit, can be installed by merely dropping it into the top of the box. Since the machine is on top, the hot air from it rises away from the box, allowing the box to operate in a cooler atmosphere than if it were bathed in hot air from the machine.

The machine is characterized by a high degree of safety by reason of the total enclosure of all moving parts. This construction also prevents trouble due to tampering. In



The Problem of Refrigeration for the Apartment Kitchen, Which Has Always Been a Troublesome One, Has Been Solved by the Perfection of Electric Refrigeration and This Special Apartment Unit Marks a New Point of Perfection in This Type of Equipment.

case anything ever does go wrong with the machine, it is serviced by simply removing the entire unit, lifting it off of the box, and replacing it with another unit. The machine is exceptionally quiet and vibrationless.

Another innovation is the vitreous enamel freezing chamber. This feature makes the chamber very sanitary and easy to clean. Tests have shown that these machines under extreme conditions, for example, operating in a room temperature of 100 degrees, will maintain temperatures under 50 degrees in the food compartment.

The machines are manufactured as complete units and are thoroughly tested and inspected for leaks. This makes it possible for unskilled workmen to install the units without the troubles which occur when unskilled men pipe a machine from the cellar to the box.

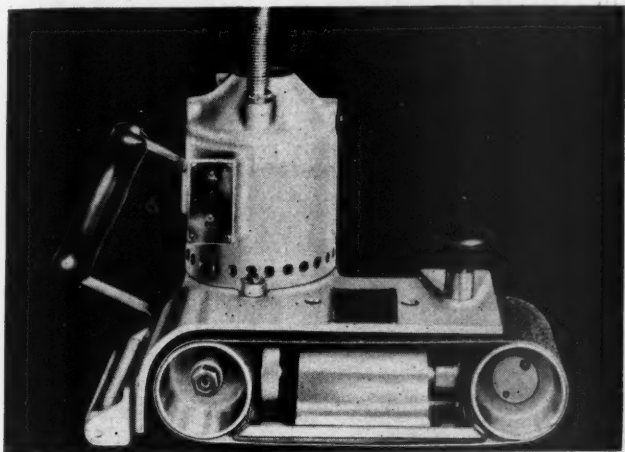
It is maintained by the manufacturers of this refrigerator that the ideal apartment house refrigerator is one which is self-contained. Individual control of refrigerators in each apartment is an economic feature which interests the apartment building owner. With refrigerators of the type described here those in apartments which are not rented may be shut off when not in use and the temperature control permits each tenant to maintain any temperature.

Then, too, the owner considers the continuity of service. If one unit fails only one tenant is affected and replacement can be made very quickly. Since these units are air cooled the building owner is relieved of any water expense and by allowing the tenant to pay for the electric current consumed by the refrigerator, just as for other current used in his apartment, an additional expense is eliminated.

Efficient Belt Sander

HERE is offered a new model, belt sanding machine which was developed as a result of the demand for a larger and heavy duty machine after the introduction of a small sturdy machine of the same type. Its dimensions are 9½ inches high, 7½ inches wide and 15½ inches long. It weighs 22 pounds and has pulleys with a diameter of 2¾ inches. The belt size is four by 27 inches and it runs at a speed of 2,000 feet per minute.

This machine is equipped with a new type one horsepower motor that shows little rise in temperature after continuous use, and with sufficient power to meet any demand placed upon it. It is also a universal motor operating on either direct or alternating current, of 25 to 60 cycles and is supplied in any voltage from 32 to 250,



A New, Heavy Duty, Belt Sanding Machine, Similar to This Company's Light Model Which Is Well Known and Exceedingly Popular.

inclusive, 110-volt being supplied when voltage is not specified. It will operate from any lighting current if the line has a 20-ampere fuse.

This sander will eliminate hand sanding and being a hand, belt machine produces an excellent smooth finish, without ripple marks. Flexible pads can be furnished with which the operator can sand slightly curved surfaces. Entire floor areas can be sanded leaving a chatterless and waveless finish and the machine will sand right up to the wall, eliminating hand scraping. It can be furnished with a handle attachment that enables the operator to sand floors with ease.

Belts can be changed in a fraction of a minute and the manufacturers can furnish belts for cutting wood or metal, made up ready to be slipped on over the pulleys. The tension on the belt is automatically correct.



Luminous Room Numbers

THE illustration shows a hotel room number specially developed to meet a demand for hotel room numbers which would be visible in the dark. It is being manufactured by a company which has long been a leader in the manufacture of radium luminous compound for fine watches, clocks, electrical, aeronautical and marine instruments.

The individual number consists of a frame of brass, measuring three inches by 1¾ inches and finished in bronze Duco. Other Duco finishes or polished or brushed brass or unusual lacquer or enamel finishes may be obtained on special order at special prices. Into this frame there fits a glass plate and behind it a plaque on

which is the number. This plaque is of black pyralin .08 inch thick, ashed and polished. Other colors and wood grain finishes are made up special.

The numerals are 1½ inches high, shaded arabic. They are sunken with raised edges. Four ¼-inch flat head brass screws are furnished with each number and after installing, these screws which fasten the frame to the door are entirely hidden.

Since all orders for these numbers must be made up to order, about 10 days is required for filling orders and two weeks where a special frame finish is required.

These room numbers are easily deciphered under any light conditions or in total darkness. They are graceful and attractive in design and finish and are so framed that they always remain neat and clean and bright. They are simply and easily installed and can be furnished in finishes to match any door finish. Because of the concealed screws by which they are attached they are not readily stolen by souvenir hunters. They do not require any maintenance.

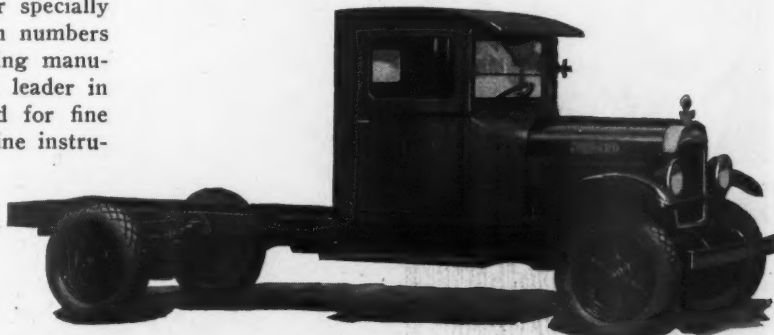


New Truck Features Flexibility

AVERAGE operating speed is gradually being raised for all types of vehicles throughout the country and, in view of the fact that a larger percentage of the country's motor driven traffic travels over one-third of the country's highways, there is only one way to avoid hopeless congestion. Trucks must be made so they can keep up with the procession, since it is necessary for trucks to operate over the same routes traveled by other vehicles. It is necessary that trucks be more flexible, easier to steer, quicker on the getaway and quicker to stop.

In line with this idea one manufacturer of motor trucks has developed the new model shown in the illustration. The many refinements on this model make it particularly adaptable to what may be called "heavy-light" delivery, it is stated. It lends itself to attractive bodies that speak favorably for the owners, and still has the size, capacity, power and speed required for the haulage of a great quantity of merchandise.

This new truck is a 1½-2 ton capacity, having four-wheel brakes, four-speed transmission, and is powered by a six cylinder engine having an S. A. E. rating of 27.34 horsepower. The chassis is available in several sizes, the standard being a 151-inch wheelbase and the special having a 163-inch wheelbase. The specification and equipment throughout are those of a high grade truck for efficient service.



Here Is a New Model Motor Truck Designed to Meet the Rapidly Increasing Traffic Demands That Face the Contractor.



These Luminous Room Numbers, Visible in Daylight or Dark, Were Designed for Hotel Use.

New Dining Table Efficiency

STRIVING for economy, convenience and 100 per cent use of valuable home and department space the manufacturers of kitchen equipment have done wonders, and builders have been quick to take up their suggestions regarding modern kitchen and pantry equipment. The latest development, just announced, is a table complete with two benches which tucks away into remarkably small space, and presents a beautiful finished appearance both in the put away and the service positions.

This equipment is a real piece of furniture designed and manufactured by a prominent manufacturer of dining room furniture so that there is both skill, artistry and efficiency in production in this new item.

The accompanying photographs show this new table installed in connection with an attractive mantel, this being suitable for a living room, making a dining room end when desired.

Another favorite arrangement places this ingenious table underneath a window as in a kitchen or breakfast alcove.

The entire assembly of the table and benches is remarkably simple. Self-releasing springs cause the bench legs and all other parts to fold up automatically and in the proper order. It is impossible to put it away wrong or to wrench or break any of the parts or connections. It is "fool-proof." When folded away nothing is visible but the beautifully finished table top, the benches and all connections being snugly tucked away underneath and out of sight.

Those planning and building apartment houses, residential hotels and private homes will quickly see the space-saving advantages and the convenience of this new fold-away table. Why set aside so much valuable space for a dining room which at most is used only a few hours each day? Modern ideas of efficient living are eliminating the large

dining rooms and bringing into favor the dinette or small breakfast alcove. This new equipment so strongly made and beautifully finished is in line with the times and will be quickly adopted.

A staff of district representatives is being recruited from among the *AMERICAN BUILDER* readers to call on architects and builders and introduce these new tables. The proposition is very interesting and the opportunity looks good. Those interested should lose no time in addressing the



One Style Presents This Folding Dining Table in Connection with an Attractive Mantel.

Editor of the *AMERICAN BUILDER* What's New Department,
1901 Prairie Avenue, Chicago.



Well Known Wallboard Improved

A WELL known type of wallboard, which has been on the market for over 30 years, has recently been improved to make it more widely useful for the various purposes to which it is adapted. The wallboard differs decidedly from other types. It consists of a core of strips of redwood pressed between two sheets of heavy paper or cardboard, and the whole permanently cemented together. The thickness of this board was $\frac{1}{4}$ inch. The facing material has, in the past, been of a dark red color.

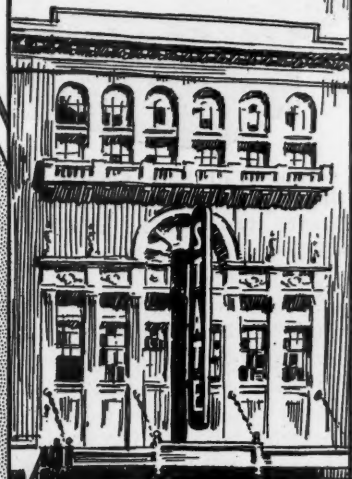
The manufacturers have for some time been making this board with the facing material of a cream tint for special customers. The demand for this, among the general trade, became so insistent, it is stated, that it was finally decided to put this product on the market for general distribution.

The new color has a smooth finish which lends itself to every decorative treatment and is in itself very attractive when unfinished. The new surface is specially sized to take paint, stain, calcimine and wall paper without further preparation. In addition to this the strength has been increased.



When the Table Is Opened a Beautiful Strong Piece of Dining Furniture Is Revealed.

THEATERS



They Can All Use Johnson's Liquid Wax Glaze

Wherever textured and sand finished walls are used—Wherever people congregate or live, you can decorate with Johnson's Liquid Wax Glaze. The simple bungalow, the palatial home, hotels

and apartment buildings are all good prospects to the user of Johnson's Liquid Wax Glaze. This adaptable finish provides almost unlimited possibilities for artistic color treatment.

It is easy to use and has great covering capacity. Multi-color effects can be obtained with a single setting of ladders and scaffolds. Unusual color effects and outstanding advantages of cleanliness, long life and low cost recommend it over all other decorating mediums. The new business you can get and the opportunity for more decorating work from old customers open the door to greatly increased profits for you.

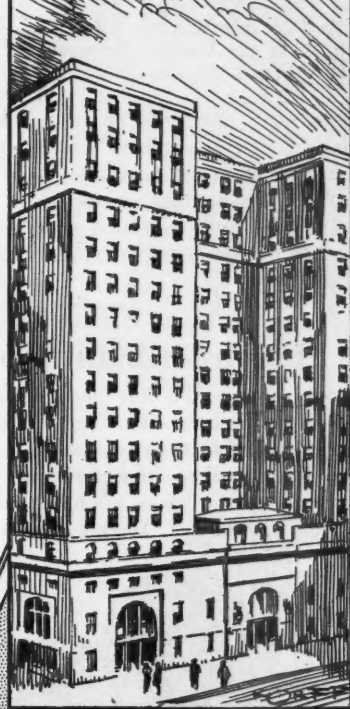
HOMES



APARTMENTS



HOTELS



JOHNSON'S LIQUID WAX GLAZE

A Liberal Free Sample

We want every painter and decorator to learn of the decorative possibilities of Johnson's Liquid Wax Glaze and the opportunity for profit it has for him. The coupon will bring a generous quart size sample with complete instructions.

Clip to letterhead or business card

S. C. Johnson & Son, Dept. AB7, Racine, Wis.

Please send me a Free quart size sample of Johnson's Liquid Wax Glaze with complete instructions.

Name

Address

City.....State.....

Compact Electric Glue Pot

HERE is a compact little device to carry to the job instead of taking the work to the glue pot. The glue is maintained at a constant temperature of 150 degrees



With This Portable Electric Glue Pot on the Job It Is no Longer Necessary to Take the Work to the Glue Pot.

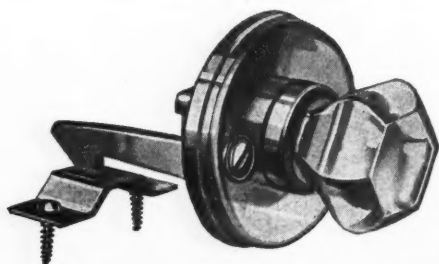
Fahrenheit, which gives the best working consistency for smooth tight joints. The heating element is a nichrome ribbon, with mica plates and thermostatic control. The glue container of two quarts capacity is cast aluminum carefully machined to fit a gray iron receptacle, thereby conserving heat.

The heating element is tightly sealed with asbestos to eliminate fire hazard, short circuits, etc. The sides of the pot are sloped to minimize spillage and a heavy iron wiper across the center of the glue container prevents waste from drippage. This electric glue pot is a distinct advance over the old style glue pot and, once used, will be found practically indispensable. It is made for use with either 110 or 220-volt alternating current.



Latch for Light Doors

THIS novel door catch has been designed as an addition to a well-known line. In addition to its simple beauty the mechanical construction is such as to insure quick installation and positive latching. Less than one-tenth of a turn of the glass knob, either to the right or left, unlatches the catch. Merely pushing the door shut



Quick Installation and Positive Latching Are Assured with This New Latch for Cabinet Doors.

It is a convenient and attractive latching device for all types of light doors on cupboards, kitchen cabinets, medicine cabinets and similar storage spaces.



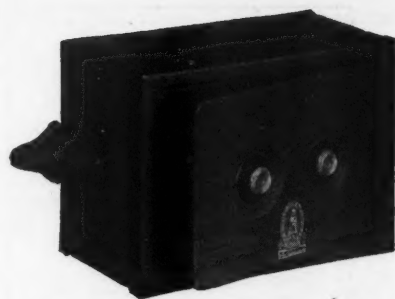
A Reliable Wall Safe

PROTECTION against both theft and fire is afforded the family valuables by the installation of a wall safe of the type illustrated here. This safe is fastened into position through the inside so that after the bolts have been secured to joists or other solid supports it cannot be removed from the outside. It is stated that the brackets and bolts are of specially treated metals which no hack-saw or chisel known to man can pierce.

The door is locked by five bolts, a system of construction which jimmies cannot penetrate, and interlocking steps and flanges on door and walls eliminate even the opportunity for jimmying and protect the contents of the safe from fire at the same time.

This safe has been tested, as to its resistance to fire, both in the laboratory and actual fires. In the laboratory three safes were placed in a force draught furnace for one hour and ten minutes and the fire maintained at 2,600 degrees Fahrenheit. It took three hours for the safes to cool to the point where they could be handled and when opened the contents, consisting of delicate jewels, watches, and papers were found to be in perfect condition. In an actual fire, which practically demolished the building, the only valuables which came through unharmed were those kept in one of these safes and among the unharmed papers was the only record the owner had ever compiled showing the value of his possessions.

This safe, though built like a large and heavy safe, weighs but 39 pounds. It is finished in black crystalline, with burnished dials. The outside dimensions are: length, 14 inches; height, 10 inches; depth, eight inches, and the interior measures 11 by seven by six inches. It is equipped with two lacquered, lined, jewel boxes having separate locks.

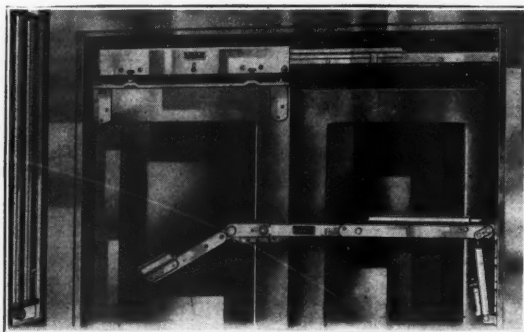


This Wall Safe Offers Assured Protection Against Both Fire and Theft for Money, Jewelry and Papers.



New Elevator Door Hanger

THIS new elevator door hanger is made for both single and two-speed doors, doors in pairs, combination swinging doors and two-speed combination swing and slide doors. It is attractive in appearance and, being completely enclosed, dust and dirt are positively eliminated. One of the important installation features is that it requires the minimum amount of head room. The projecting ledge of the angle above the top of the track serves to protect the hangers from falling dirt and also makes a very convenient place for attaching a cover if a cover is required. The angle also makes a much stiffer construction than would a flat plate.



A Hanger for Elevator Doors Designed to Provide for a Wide Variety of Installation Requirements.

The limit roller is adjustable and is mounted on an eccentric shaft or axle. If the nut of the limit roller is loosened, the axle can be turned a short distance by means of the screwdriver slot which will either draw the roller closer to the door or farther away from it. When the proper adjustment is made the axle will be locked in position by the nut.

What is your Time worth?

A Frame for Every Kind of Building



a frame up
in 10 minutes

IF you are a hustling builder, your time is worth real money. You do not want to slight any of the items in your building program but you want to handle each job in the quickest, surest, best way.

If you consider your time worth money, you can save and make money by using Andersen Window and Door Frames*. "A frame up in ten minutes" is more than a slogan. It is a guarantee of time-saving service to contrac-

tors and builders. Andersen Frames are so accurately milled and inspected that they always go together perfectly to make close fitting, weather-resisting joints. Thus they help builders to give value and build reputations as well as to save time and make profits.

Fill out and mail the coupon below; we will tell you how to save time and money with Andersen Window Frames.

*Look for the Andersen Trade Mark on every frame.

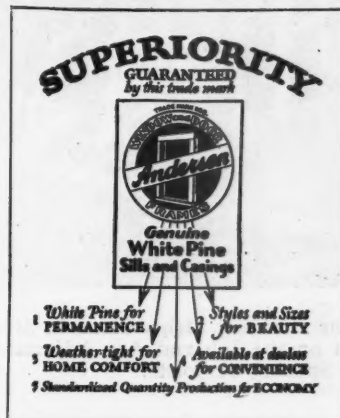
Andersen FRAMES

ANDERSEN LUMBER COMPANY
Box 2107, Bayport, Minnesota.

Please send me without cost or obligation the material checked in squares on this coupon.

Name _____
Business _____
Street Address _____
City _____ State _____
Name Lumber Dealer _____

- ☐ Set of folders describing construction and uses of Andersen Frames.
☐ "How to Make Your New Home More Comfortable"—an illustrated booklet of interest to all home builders.



White Pine for PERMANENCE
Weather-tight for HOME COMFORT
Standardized Quantity Production for ECONOMY
Styles and Sizes for BEAUTY
Available at dealers for CONVENIENCE

Andersen Distinctive Features

- 1 Patented, noiseless, long wearing Andersen pulleys used exclusively.
- 2 Genuine soft White Pine sills and casings—last a lifetime.
- 3 Patented, exclusive weather-tight features including groove for wide blind stop.
- 4 Absolute accuracy of milling.
- 5 A Frame up in 10 minutes.
- 6 Standardized styles and sizes, convertible for all architectural needs.
- 7 Nationally known and distributed.
- 8 Dependable because guaranteed by a reliable manufacturer.

Sold by Leading Building Material Dealers

Improved Steel Bridging

THE illustrations show the application of a new type of steel bridging designed to assure economy, convenience and strength. Great stress is laid, by the manufacturers, upon the integral connection of three joists made by this brace and it is claimed that extensive tests made at the plant clearly demonstrate the benefit from connecting three joists. Strains are thereby carried to two adjacent joists, on either side, instead of only one.

This bridging is adjustable to variations in the size of joists and spacing so that a given size of brace may be applied to different sizes of joists, in fact, four stock sizes are provided to cover two and three inch joists, on 12 inch and 16 inch centers. This bridging is shipped in cartons, in straight lengths, but when applied it is bent to an inverted "V" shape. One brace is dropped over the top of each joist, the ends extending each way and underneath the adjoining joists. A nail is driven down through the top depressed aperture and finishes flush.



This Type of Steel Bridging Makes an Integral Connection Between Three Joists.

After the floor is laid, the bottom ends are nailed, each being bent around the under edge of the joist and up the side. One nail only is sufficient, although several apertures are provided to facilitate nailing



The Bridging Strips Come in Straight Pieces Which Are Bent on the Job and Are Adjustable to Variations in Size and Spacing of Joists.

and avoid knots if any come in the way. Although these braces are corrugated longitudinally their chief bracing action is said to be through tension and, therefore, the lapping of the brace around the further side of the joist and securing there affords a stronger attachment than would be possible on the lower or inner edge only.

The lower ends of the bridging being bent in this way makes the bridging adjust itself perfectly to the spacing of the joists. The manufacturers point out the saving of nails which this bridging effects, only three per joist as against eight with wooden bridging. This also means a saving of labor in applying.



Heating Boilers in Colors

THE desire for clean basements which might be put to more practical uses suggested the design of the boiler shown in the illustration. This boiler is totally

encased in a bright scarlet jacket which is easily kept bright and new looking. It is entirely dustproof and moistureproof. Great care is taken in applying the enamel, it is stated, so that the finish is permanent.

There is a symmetry and gracefulness worked into the design of this boiler which is intended to appeal to women. The automatic draft regulator, with its accessories, is out of sight at the rear and the shaker grates are likewise concealed in front.

This boiler makes a flexible heating installation that is readily converted to the owner's choice of fuel and heat. It is designed with an extended ash pit and deep fire box to accommodate either oil or coal and offers a choice of steam, hot water or vapor heat. It is made in six sizes with ratings up to 1,200 square feet, steam, or 1,950 square feet, hot water.

The dome and staggered fire travel construction provide unusual heating efficiency, it is stated, by shunting flames and hot gases back and forth, again and again, over all heating surfaces before passing them on up the chimney.



These Boilers, of Well Known Make, Are Now Available in Bright Red Jackets.

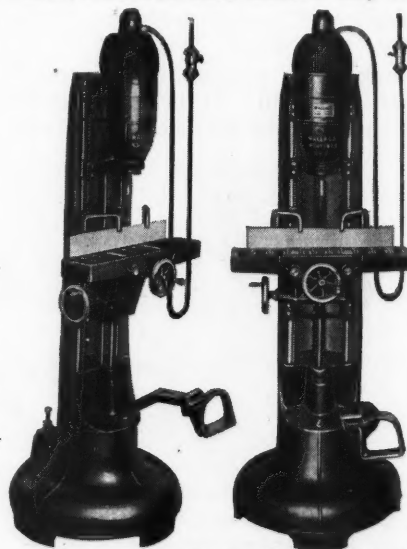


Portable Hollow Chisel Mortiser

BORING square holes is an operation so common that machines for the purpose have been well known for years. There has now been developed, however, a portable, hollow chisel mortiser which does the highest caliber work on the squares holes up to $\frac{1}{2}$ inch diameter. Now the shop which has need for such a machine can meet its requirements without the heavy investment involved in purchasing a large stationary mortiser, and with the added advantage of portability. It can be moved about, easily, to bring it close to the work in hand.

Simplicity has been secured and efficiency increased by omitting all attachments and adjustments not called for in ordinary work. The machine is symmetrical in design, perfectly balanced and accurate in every detail. Three, easy rolling casters in the round, cast iron base make it easy to move.

Mounted on the upper carriage is a high grade motor specially designed to meet the requirements of this machine, to operate at a constant speed under maximum load and keep cool by a heavy current of air drawn through a screen at the top. This same air forced downward by a fan on the armature shaft, cools the chisel and bit and blows away chips. The motor is entirely closed and dustproof.

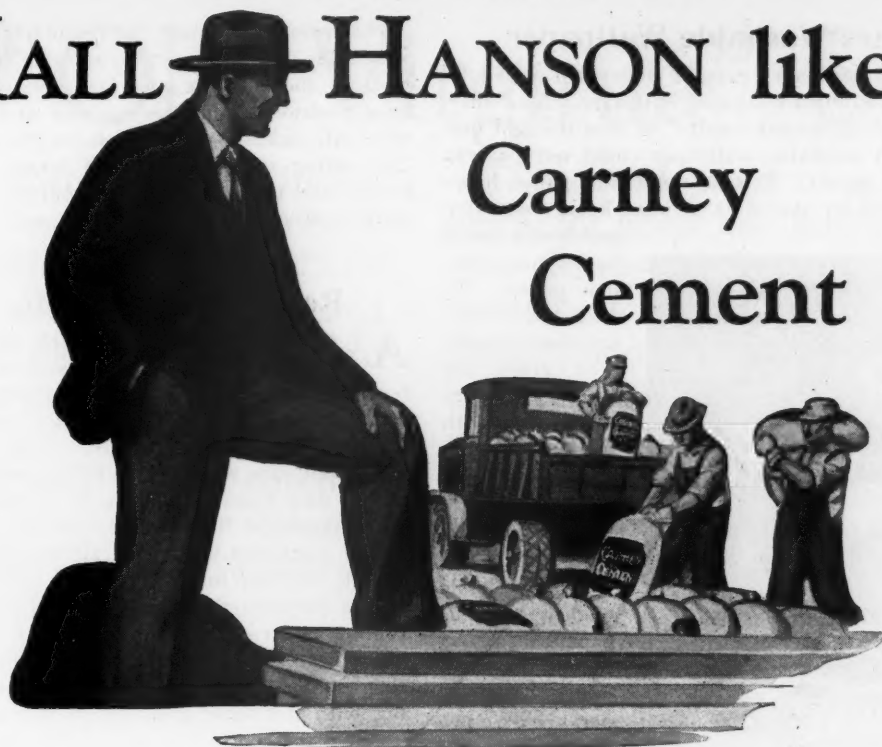


This New, Portable, Hollow Chisel Mortiser Can Be Used for Square Holes Up to $\frac{1}{2}$ Inch.



The General Electric Company, Schenectady, N. Y., has published a new booklet under the title, "Floodlighting, Including Searchlight and Airport Lighting."

HALL HANSON likes Carney Cement



HE SPEAKS of the masonry job on the Commonwealth Edison Company Power House which he supervised for the J. W. Snyder Company.

"For the buttered brick work, which was very intricate and difficult, we puddled the Carney Cement vigorously before sanding and using. Mixed with clean lake sand, the resulting mortar far exceeded our expectations as to butteriness and uniformity of texture. It was as smooth as satin, looked good enough to eat and carried the red mortar color perfectly."

THE CARNEY COMPANY

DISTRICT SALES OFFICES

CLEVELAND
Leafer Building

CHICAGO
Builders Building

DETROIT
Book Tower

ST. LOUIS
Louderman Building

MINNEAPOLIS
Builders Exchange

Cement Makers



Since 1883

Specifications:

1 part Carney Cement to
3 or 4 parts sand depend-
ing upon quality of sand.

CARNEY CEMENT

for Brick and Tile Mortar

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Now Comes Washable Wallpaper

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Even Ink Spots Can Be Washed Off This New Wallpaper, Which Reduces the Cost of Redecorating by Its Ability To Be Kept Clean.

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The washable quality of this paper means a remarkable economy. Wallpapers become soiled very quickly under certain conditions and the walls cannot be restored to their original appearance except by repapering. With this washable paper one can simply wipe the paper off with a damp cloth when it is soiled and dust, grease spots and even ink can be removed. It is an excellent wall covering for any room and an ideal one for bathrooms, kitchens, and rooms where children play and are likely to smear their hands on the wall or where soot or moisture deface the walls.



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The spring stud snaps the receptacle into place, it is only necessary to run one screw in from the front, a one man job. The fixed position of the spring stud and the terminals makes it easy to polarize the sign. The spring stud and exposed screws are bronze and the screw shell is copper, high quality throughout.



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After the work was completed and had been subjected to the action of the sun for a few days, the surface appearance of the roof was not greatly altered. Each separate tile stood out as an individual tile, but was slate gray in color, instead of the usual red. The leaks were stopped by this treatment and the value of the roof deck as a promenade was retained, as this unusual roofing composition forms a sheet almost like a rubber floor.



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The "Old Virginia" Spirit

The new Cavalier Hotel at Virginia Beach, Virginia, was designed to embody as much as possible of the spirit of "Old Virginia." Pine was the lumber selected after a study by the architects showed its extensive use in old Virginia homes and buildings.

Pine panelled walls in the entrance lobby greet the guest in true colonial spirit. The main lounge is dressed in Pine, the fireplace in its attractive setting being the dominating note. Throughout the hotel, Pine imparts the spirit of "Old Virginia."



Entrance lobby with Pine panelled walls. Millwork supplied by M. T. Blassingham & Co. and C. M. Baylor and Co.; Shevlin Pine by McEwen Lumber Company; all of Norfolk, Virginia.

Shevlin Pine Used

The sash, doors, interior and exterior finish of the Cavalier Hotel are all of Shevlin California White Pine from McCloud, California.

This wood is winning favor everywhere for home and building construction. Its easy-working qualities make it desirable for all woodwork. The light color, smooth texture and even grain are attractive with most any finish, whether left natural or treated with paint, enamel or stain. It endures and seldom warps or shrinks.

Abundant Supply Available

The Shevlin, Carpenter & Clarke Company has a stand of California White Pine sufficient to supply the nation's needs for decades, perhaps indefinitely. You will find it carefully seasoned, rigidly graded and smoothly milled.

Leading lumber dealers can supply you with Shevlin California White Pine and the other varieties: Shevlin California Sugar Pine, Shevlin Ponderosa Pine, Shevlin Norway Pine and Shevlin Northern White Pine.

Get More Information About Pine

The book, "Specify Shevlin Pine," contains detailed information about each variety of Shevlin Pine—the characteristics, uses, physical properties and other data.

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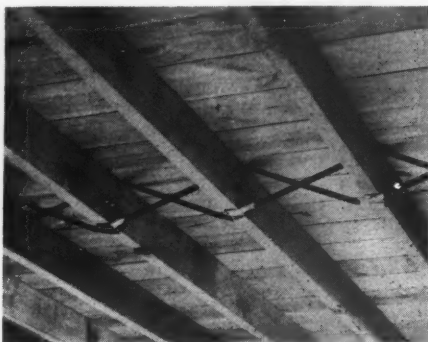
Shevlin, Carpenter & Clarke Company
 903 First National-Soo Line Bldg., Minneapolis, Minn.
 Chicago Sales Office: 1866 Continental & Commercial Bank Bldg.
 San Francisco Sales Office: 1028 Monadnock Building.
 Toronto, Ontario, Sales Office: 606 Royal Bank Building.
 Sold in New York by N. H. Morgan, 1205 Graybar Bldg.

SHEVLIN PINE

Improved Steel Bridging

THE illustrations show the application of a new type of steel bridging designed to assure economy, convenience and strength. Great stress is laid, by the manufacturers, upon the integral connection of three joists made by this brace and it is claimed that extensive tests made at the plant clearly demonstrate the benefit from connecting three joists. Strains are thereby carried to two adjacent joists, on either side, instead of only one.

This bridging is adjustable to variations in the size of joists and spacing so that a given size of brace may be applied to different sizes of joists, in fact, four stock sizes are provided to cover two and three inch joists, on 12 inch and 16 inch centers. This bridging is shipped in cartons, in straight lengths, but when applied it is bent to an inverted "V" shape. One brace is dropped over the top of each joist, the ends extending each way and underneath the adjoining joists. A nail is driven down through the top depressed aperture and finishes flush.



This Type of Steel Bridging Makes an Integral Connection Between Three Joists.

After the floor is laid, the bottom ends are nailed, each being bent around the under edge of the joist and up the side. One nail only is sufficient, although several apertures are provided to facilitate nailing



The Bridging Strips Come in Straight Pieces Which Are Bent on the Job and Are Adjustable to Variations in Size and Spacing of Joists.

and avoid knots if any come in the way. Although these braces are corrugated longitudinally their chief bracing action is said to be through tension and, therefore, the lapping of the brace around the further side of the joist and securing there affords a stronger attachment than would be possible on the lower or inner edge only.

The lower ends of the bridging being bent in this way makes the bridging adjust itself perfectly to the spacing of the joists. The manufacturers point out the saving of nails which this bridging effects, only three per joist as against eight with wooden bridging. This also means a saving of labor in applying.



Heating Boilers in Colors

THE desire for clean basements which might be put to more practical uses suggested the design of the boiler shown in the illustration. This boiler is totally

encased in a bright scarlet jacket which is easily kept bright and new looking. It is entirely dustproof and moistureproof. Great care is taken in applying the enamel, it is stated, so that the finish is permanent.

There is a symmetry and gracefulness worked into the design of this boiler which is intended to appeal to women. The automatic draft regulator, with its accessories, is out of sight at the rear and the shaker grates are likewise concealed in front.

This boiler makes a flexible heating installation that is readily converted to the owner's choice of fuel and heat. It is designed with an extended ash pit and deep fire box to accommodate either oil or coal and offers a choice of steam, hot water or vapor heat. It is made in six sizes with ratings up to 1,200 square feet, steam, or 1,950 square feet, hot water.

The dome and staggered fire travel construction provide unusual heating efficiency, it is stated, by shunting flames and hot gases back and forth, again and again, over all heating surfaces before passing them on up the chimney.



These Boilers, of Well Known Make, Are Now Available in Bright Red Jackets.

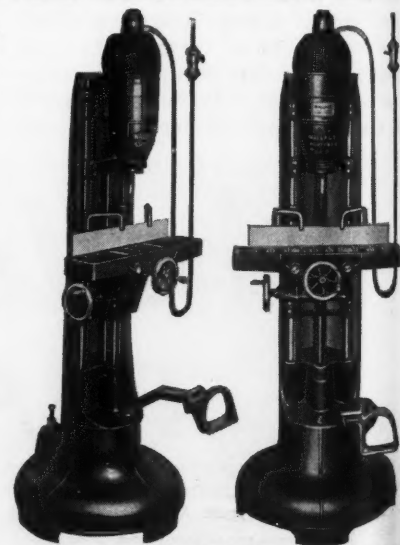


Portable Hollow Chisel Mortiser

BORING square holes is an operation so common that machines for the purpose have been well known for years. There has now been developed, however, a portable, hollow chisel mortiser which does the highest caliber work on the squares holes up to 1/2 inch diameter. Now the shop which has need for such a machine can meet its requirements without the heavy investment involved in purchasing a large stationary mortiser, and with the added advantage of portability. It can be moved about, easily, to bring it close to the work in hand.

Simplicity has been secured and efficiency increased by omitting all attachments and adjustments not called for in ordinary work. The machine is symmetrical in design, perfectly balanced and accurate in every detail. Three, easy rolling casters in the round, cast iron base make it easy to move.

Mounted on the upper carriage is a high grade motor specially designed to meet the requirements of this machine, to operate at a constant speed under maximum load and keep cool by a heavy current of air drawn through a screen at the top. This same air forced downward by a fan on the armature shaft, cools the chisel and bit and blows away chips. The motor is entirely closed and dustproof.



This New, Portable, Hollow Chisel Mortiser Can Be Used for Square Holes Up to 1/2 Inch.



The General Electric Company, Schenectady, N. Y., has published a new booklet under the title, "Floodlighting, Including Searchlight and Airport Lighting."

HALL HANSON likes Carney Cement



HE SPEAKS of the masonry job on the Commonwealth Edison Company Power House which he supervised for the J. W. Snyder Company.

"For the buttered brick work, which was very intricate and difficult, we puddled the Carney Cement vigorously before sanding and using. Mixed with clean lake sand, the resulting mortar far exceeded our expectations as to butteriness and uniformity of texture. It was as smooth as satin, looked good enough to eat and carried the red mortar color perfectly."

THE CARNEY COMPANY

DISTRICT SALES OFFICES

CLEVELAND
Leafer Building

CHICAGO
Builders Building

DETROIT
Book Tower

ST. LOUIS
Louderman Building

MINNEAPOLIS
Builders Exchange

Cement Makers



Since 1883

Specifications:

1 part Carney Cement to
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CARNEY CEMENT

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A NEW IMPORTANT CONTRIBUTION TO HOME BUILDING



This model is a complete fireplace—a wooden mantel (either white or mahogany finish) paneling and Radiantfire of stainless steel with silver-like finish. It is of classic simplicity, adapted to any scheme or decoration or architecture. It is easy to install; no skilled labor, no tile setting, no chimney or ash pit. Takes up little wall space.



LIVING ROOM



DINING ROOM



BEDROOM

Three Fireplaces for The Price of One

The salability, attractiveness and comfort of the home or apartment can be increased many times by adding these extra fireplaces.

You spend the price of three such units when you build an ordinary fireplace, with its masonry, chimney and ash pit, but there is no comparison in the efficient service that they render.

They come complete, ready for installation. All you have to do is provide a gas connection. The design of the mantel is such that it fits in with any interior.

A Humphrey "Radiantfire" Gas Heater provides clean, odorless heat. It is always ready for instant use. Many days in spring, fall and winter the necessity of operating the furnace can be eliminated. The joy and pleasure of sitting before a warm, attractive fire without any dirt or trouble, make satisfied owners and tenants.

Plan your Homes and Apartments for Humphrey "Radiantfire" Mantels.

Details and prices mailed on request. Write today

The HUMPHREY Radiantfire Mantel

No smoke—No odor. No ashes—No dust

GENERAL GAS LIGHT COMPANY, KALAMAZOO, MICH.

New York • 44 West Broadway San Francisco • 135 Bluxome Street

IF IT ISN'T A HUMPHREY, IT ISN'T A RADIANTFIRE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Pine Gives Cavalier Hotel



The fireplace in the main lounge of the Cavalier Hotel embodies the spirit of "Old Virginia" hospitality. The interior finish, exterior finish, sash and doors throughout this new hotel are of Shevlin California White Pine.

SHEVLIN PINE

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SHEVLIN PINE

NEWS *of the* FIELD



Maple Panels the Latest Improvement in Paine Lumber Co. Doors

By D. C. McCRAV

A STILL better "Miracle" door has been the motive actuating Mr. Nathan Paine of Oshkosh, Wis., in bringing out his new line of doors with white pine stiles and rails and figured white maple panels, as announced to the trade on June 4.

The "Miracle" door has been for a number of years one of the leaders in beauty of design and quality of manufacture. The Paine Lumber Co., Ltd., has concentrated on its construction and workmanship with success measured by more than four million doors now hanging on hinges.

With this new development of hard maple panels, produced in very large quantities, a new standard in low cost, high quality doors is made available to builders.

Maple panels, as all builders, architects and dealers know, are extra strong—straight and clean. They take beautifully any finish—stain, paint—varnished, waxed or oiled. Ordinarily they are too costly for any but the most expensive special doors.

The very large production of veneers in their own veneer mill unit, now offers the Paine Lumber Co., not only mass production economy but also the opportunity for selection of veneers for figure. Mr. Paine intended for some time, to feature such selections in special door jobs, carrying an extra charge for fancy figured veneer.



Beautifully Figured White Maple Panels Show the Bird's-Eye Pattern.

Thorough consideration, however, brought the decision that the "Miracle" door was entitled to every advantage that the Paine facilities offer. It seemed certain that the popularity of the "Miracle" door would be tremendously stimulated through favoring it with a selection of panel veneers of white hard maple that would add to its individuality and beauty.

The white maple veneers that are figured, and also those that are unique in natural design, are chosen for use in the "Miracle" doors. These veneers as selected are unexcelled for beauty of figure and perfection of texture.

White maple veneer panels of slightly less interesting pattern go into the Paine Company's "Klimax" line of doors.

This plan gives Paine customers a line of doors exclusive in selection for beauty and quality of materials, as well as for beauty of design and quality of workmanship, all priced in accordance with Mr. Paine's established policy of economical mass production. These doors are now in the hands of the Paine jobbers and dealers ready to satisfy the building demand.



New Company Organized

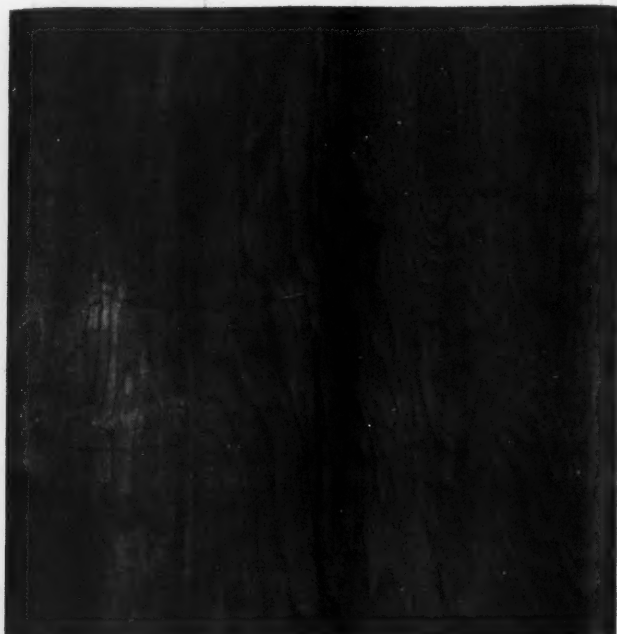
THE Gibsonburg Lime Products Company, Gibsonburg,

Ohio, has announced the appointment of Chenoweth-Stolz Company, of Atlanta, Ga., as exclusive representative and distributor. With this announcement comes the news of the organization of the Chenoweth-Stolz Company. The new organization is a corporation, the officials of which are W. M. Stolz, president and treasurer; R. Chenoweth, vice-president, and Bruce Chenoweth, vice-president and secretary. These men have all, for many years, been associated with the building material business in the Southeast and are well known to the dealers of that territory.

The Gibsonburg Lime Products Company has built a new plant said to embody unusual modern and compact features which provide a daily output of 100 tons or more and requires but 30 men for operation.



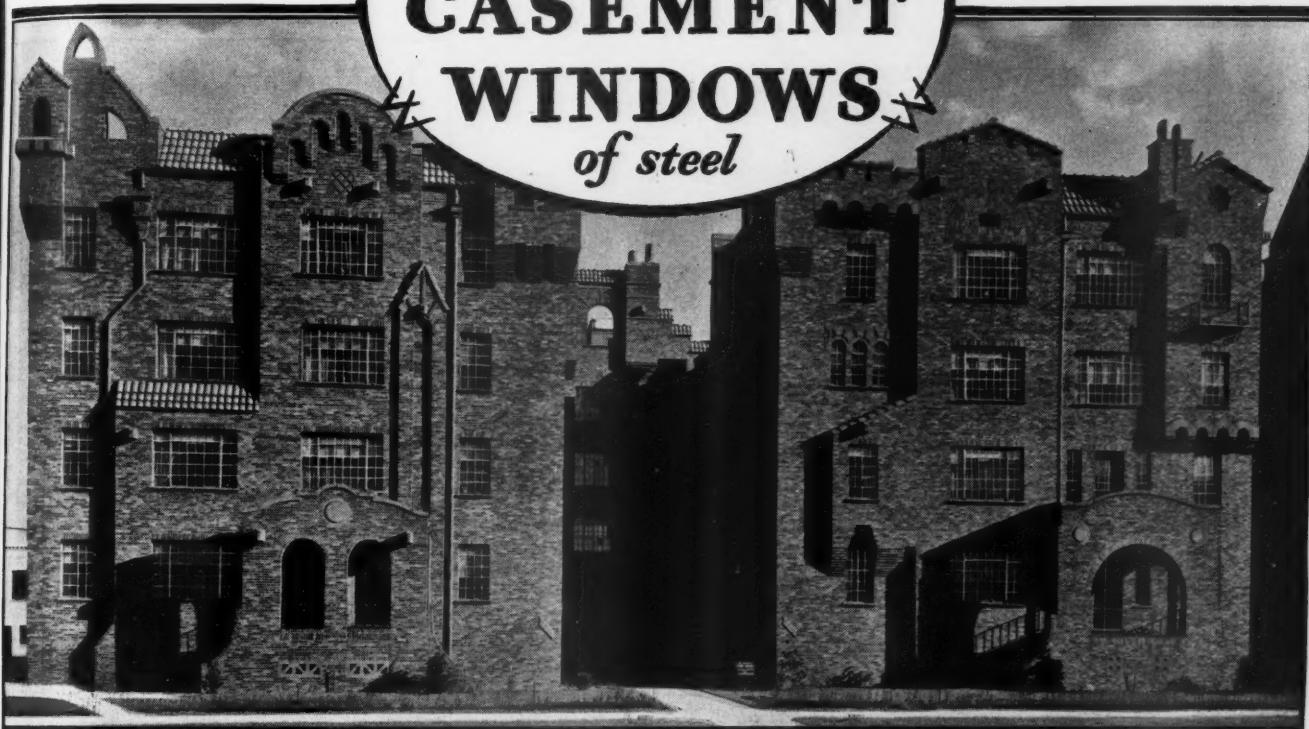
"Distinctive Doorways for Office Buildings" is the title of a handsome new booklet published by the Van Kannel Revolving Door Co., 716 Whitlock Ave., New York City, and illustrating in colors the kind of installations possible with this company's equipment.



The Rotary-Cut White Maple Veneer Gives an Infinite Variety of Grain Patterns.

Fenestra

CASEMENT WINDOWS *of steel*



This builder says: "O. K. and then some"

"The Fenestra Steel Casement Windows used in our 'El Castillo' apartment building, on Chicago Boulevard, have proven thoroughly satisfactory, not only in their low first cost and economy of installation, but also in their attractive appearance, convenience and weathertightness.

"'El Castillo' has rented with gratifying rapidity, and from the comments made by prospective tenants, we feel sure that Fenestra Casements have been a large factor in the popularity of the building. Women seem to be especially impressed by the ease with which your windows can be washed from the inside, without any danger of falling.

"Another attractive feature of Fenestra Casements is the fact that they are screened on the inside, and can be curtained in any number of pleasing styles, giving that 'different' touch for which every housewife strives. The small glass lights, too, contribute to the good appearance of the windows.

"We shall undoubtedly continue to use Fenestra Casements in our building operations, and wish to take this opportunity to thank you for the interested attention and efficient service accorded us by your representatives."

Yours very truly,

CHICAGO INVESTMENT CORPORATION
(Signed) John B. Ebert, President

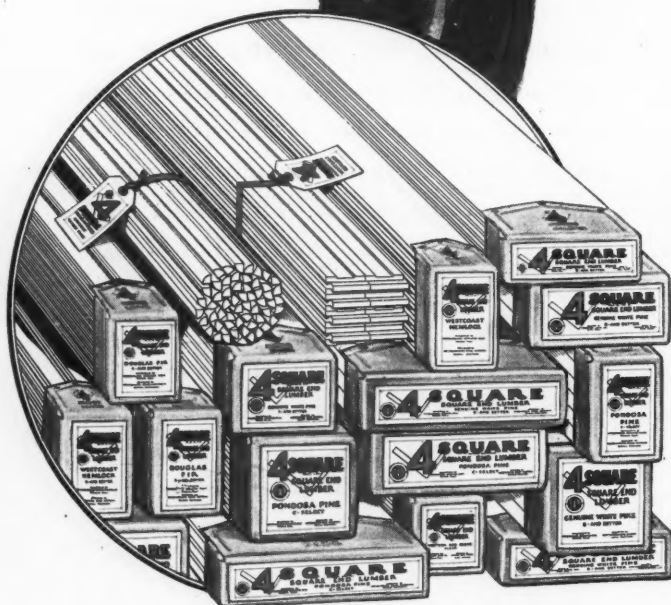
*—all reasons why you should use Fenestra Casements
in your next job. Your lumber or building supply
dealer will deliver them with the other materials.*

DETROIT STEEL PRODUCTS COMPANY, 2304 EAST GRAND BOULEVARD, DETROIT, MICHIGAN
FACTORIES: DETROIT, MICHIGAN, AND OAKLAND, CALIFORNIA / CONVENIENT WAREHOUSE STOCKS

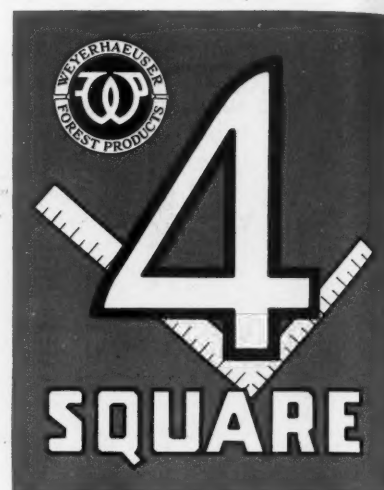
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Another Weyerhaeuser

trimmed square at both ends..



The Mark of 4 SQUARE Lumber



Packaged and Guaranteed

These items can now be purchased under the 4-Square label. Each carefully manufactured for the particular purpose for which it is intended.

SQUARE EDGE FINISHING LUMBER
 BEVEL SIDING
 COLONIAL SIDING
 DROP SIDING
 SOFTWOOD FLOORING
 END MATCHED SOFTWOOD FLOORING
 CEILING AND PARTITION
 SHELVING - STEPPING
 CASING · BASE · MOULDINGS

WEYERHAEUSER FOREST PRODUCTS

General Sales Offices: WEYERHAEUSER

District Sales Offices: MINNEAPOLIS · KANSAS CITY · CHICAGO

achievement-Wasteless Lumber!

packaged ready to use

Why builders have welcomed this labor saving lumber

FAR-SIGHTED builders are praising Weyerhaeuser's new 4-Square Lumber for these three significant reasons.

FIRST, it permits more careful workmanship throughout because it saves most of the time your carpenters ordinarily spend in hand-trimming ordinary lumber. All 4-Square Lumber is trimmed square and smooth at both ends—ready to use just as taken from the 4-Square package.

SECOND, 4-Square Lumber is better lumber in every way. It is properly seasoned. Uniform in quality. Cut to standard sizes and exact lengths. Packaged with faces and ends protected. And the species and grade are plainly printed on the 4-Square label and guaranteed by Weyerhaeuser. *By every test, 4-Square!*

THIRD, the advantages of 4-Square Lumber are being nationally advertised to the public—giving the public an unmistakable way to judge lumber quality, lumber values and *builders*. It is now being distributed by local lumber dealers. If your dealer cannot supply it, write us.

SAINT PAUL • MINNESOTA

SALES COMPANY • Spokane, Washington

TOLEDO • PITTSBURGH • PHILADELPHIA • NEW YORK

Establish Research Institute

ESTABLISHMENT of the Holland Institute of Thermology, to conduct researches into various phases of the relation of humidity, temperature and circulation of



A. H. Landwehr, President of the Holland Furnace Company, Who Has Announced the Establishment of the Holland Institute of Thermology.

air to public welfare, has been announced by A. H. Landwehr, president of the Holland Furnace Company, Holland, Mich. It will attempt to solve some of the heating and ventilating problems of the construction industry, study the effect of humidity upon various industrial products used in homes and investigate problems connected with industrial housing and the efficiency and working conditions of workers in shops and offices.

"The Institute will be given ample resources to teach the American home owner, in a practical way, the science of health heating and ventilation," Mr. Landwehr stated. "This object, of course, has many ramifications into numerous industries. A competent engineer will be placed in charge and the results of tests and investigations made by the Institute will be placed before the public from time to time in the form of reports of its findings."

Changes in Inland Personnel

THE Inland Steel Company, First National Bank Bldg., Chicago, has announced the appointment of Leigh B. Block as purchasing agent, with headquarters at the Indiana Harbor, Ind., plant. Mr. Block, who has been with the company for the past four years, succeeds J. E. Stafford, who has resigned after 16 years with Inland to become affiliated with a company handling refractory materials in the Chicago district. Howard C. Yost has joined the sales department of the Inland Steel Company and will be located at St. Paul, Minn., district sales office.



Representatives Appointed

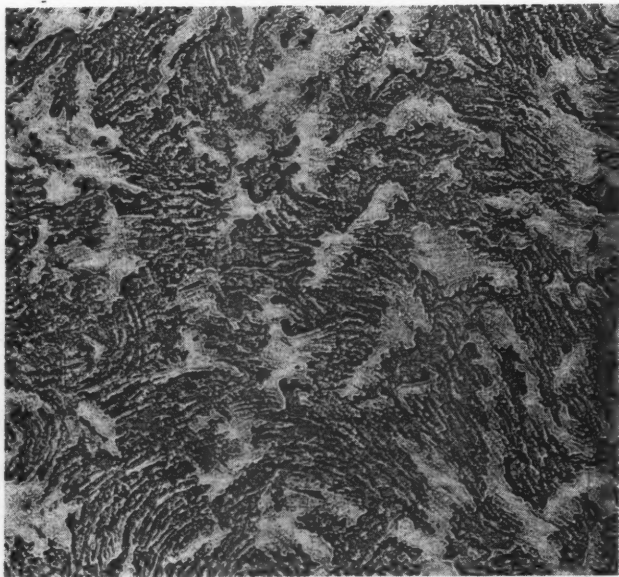
THE T. L. Smith Company, Milwaukee, Wis., announces the appointment of M. B. Rider as its factory representative for the eastern district. He will be active principally in the direction of co-operation with the various Smith distributors of that district.

The Smith company has appointed the Newlin Motor Company, Kansas City, Mo., as its representative for the western half of Missouri and the eastern half of Kansas. This company will handle the entire line of Smith construction mixers, while the Smith paver will be handled as before by the Bublitz Machinery Company. A complete stock of mixers will be carried to insure prompt delivery.



Virginia Dealers to Meet

THE mid-summer convention of the Virginia Lumber and Building Supply Dealers' Association, Inc., whose office is located at Roanoke, Va., will be held at Virginia Beach, July 19 and 20, 1928.



Buy What You See

and yet—

Preserve the texture and beauty of hand decoration

Lin-Tex, a new hand-decorated washable wall covering, is shipped to you finished and ready to apply to the wall. No more need to worry about how the wall will turn out . . . Lin-Tex is true to sample.

Apply this to new or old plaster or wall-board,—easy to remove, practically everlasting.

Write for sample and information.

Thibaut Lin-Tex

RICHARD E. THIBAUT INC., 24 West 40th St., New York

FREE How to Read Blue Prints



New Easy Practical Way That Has Doubled Pay in 2 or 3 Months!

Thousands of Men in the Building Trades Have Discovered An Altogether New Way to Double and Triple Their Incomes! Surprising, Yes—But True! Almost Over Night They Have Stepped Into Interesting, Big-pay Jobs—Become Foremen and Superintendents—Or Are Making Big Money in Business For Themselves. The Same Wonderful Opportunity is Now Offered You. Don't Send One Penny. Just Mail the Coupon For Full Set of Valuable Blue-Print Plans, Big Free Book, and Complete Details.

YOU MEN who work with your tools in the building trades make good money. But you don't get one penny more than you're entitled to. Every boss on the job—every foreman, every superintendent—is making plenty more than just your wage scale—you can figure pretty well for yourself what a lot of real money the contractor and the builder clean up. Why do these men get more money for their work than you do? Why do they clean up \$6,000 to \$15,000 a year or more? It's simply because they're trained in the "head-work" side of Building and Contracting work. They can read Blue-Print Plans. They know how to lay out and run jobs.

Get This Big-Money Training

Many men think the only way they can get practical "head-work" training is on the job. Perhaps that was true once. But thousands of Chicago Tech. graduates have proved that the idea is all wrong now. You know yourself that a man can spend 5 or 10 years working with his tools and never get a real chance to learn the things he must know, if he is ever to get into the big-pay class. Anyhow, it's a long, hard, slow process on the job.

But it's all different—the new Chicago Tech.

READ!

"Since starting the Builders' Course I have been raised to Superintendent and my pay raised 100%."

P. F. Blair, Okla.

"I owe a lot of credit to your course. Am now listed as a Brick Contractor and made about \$3,800 clear money this summer."

E. F. Baker, Ohio.

Builders' Course way—amazingly different! It's quick, easy, certain. Right at home, you get real Blue Prints used on actual jobs to examine and keep for reference. In language you can understand, as plain as A-B-C, everything is told you and worked out for you in concise, practical home lessons—no textbooks to study—you are taken by experts right through every step of Plan Reading, estimating, and Superintendence so simply and easily it is just like play. You don't need even a grade school education to understand every word and absorb every fact.

Consider what this quick, practical Chicago Tech. training has done for others. Woodside, in less than three months, rises from journeyman carpenter to foreman, then makes big money in contracting business for himself. In a few months McAvoy goes from bricklayer on the wall to foreman in charge at a big increase in pay. Marchand says, "Ten days after completing course my pay was raised 100%." Hundreds—yes, thousands of others say the same. Chicago Tech. has helped them to bigger jobs or a business of their own. It is ready right now to help you.

If You Live in or Near Chicago
Visit our day or evening classes which over 1,000 Builders attend. You can get the same training by mail—same Plans, Lessons and Instructors. Mail the coupon for details.

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We want you to see for yourself how easily you can learn to read Blue Prints and do Estimating this new, quick way—how easily you can double and triple your income. Test this yourself. Don't send one penny. Just mail the coupon. We will send you absolutely FREE a full set of practical, working Blue Prints, also valuable book, "How To Read Blue Prints." Act at once as this Free Trial opportunity may not be offered again.



Chicago Technical School for Builders,
Dept. H-121, Chicago Tech. Bldg.,
118 E. 26th St., Chicago, Ill.

Please send your Free Books and Blue Prints which I understand are mine to keep without obligation. It is also understood that no salesman will call on me.

Name
Address
City State
Occupation

NOTE: We do not employ solicitors—No salesman will call on you.

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WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

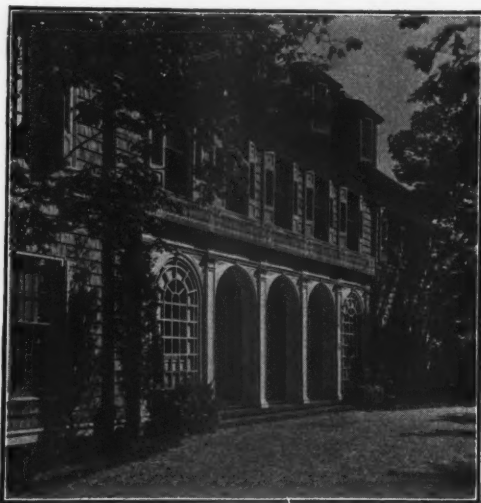
Homes they Buy are Insulated

Purchasers of new homes look for comfort. They want eye-comfort and bodily comfort. And they want purse-comfort, too.

When you insulate with Cabot's Quilt, you help out eye-comfort because the Quilt is hidden away under lath and plaster.

The Quilt keeps in the heat in winter, and keeps it out in summer, for it *resists the passage of heat, either way*. That gives real bodily comfort.

Finally, low cost of Quilt gives real purse-comfort in first cost, and its real insulating qualities keep purse-comfort up, year after year, in fuel savings.



Residence of Solomon A. Smith, Lake Forest, Illinois. Roof stained with Cabot's Green CREOSOTE Shingle Stains, side walls insulated with Cabot's Double-Ply Quilt and finished with Cabot's 241 Bleaching Oil. Architects, Puckey and Jenkins, Chicago.

Send in the coupon below (roll of Quilt) for full Quilt Information. Send it in today.

Insulate with

Cabot's Quilt

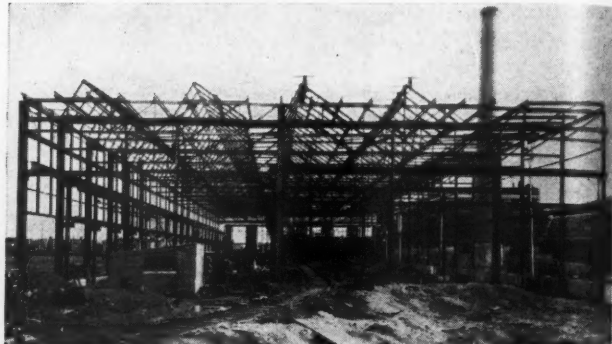
In Successful Use for Over 30 Years



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Welded Building Being Erected

TWO new factory buildings, all the structural work of which will be electric welded instead of riveted, are now being erected by the General Electric Company. One of these will be an addition to the company's plant at Bridgeport, Conn., and the other will be located at the company's Pittsfield, Mass., plant. These buildings mark



An Addition to the Philadelphia Plant of the General Electric Company Under Construction. This was the first welded building erected by this company.

a second step in the company's program of utilizing welding in the construction of its buildings. The first General Electric welded building was erected in Philadelphia as an addition to its plant there. The General Electric Company has found that less steel is required in the design of trusses for such buildings resulting in an appreciable saving in cost. Also that steel can be fabricated without noise and that simpler sections can be used.



New Directors Elected

A RECENT announcement states that John Sloane, president, and William E. S. Griswold, vice-president and treasurer, of W. & J. Sloane, Trenton, N. J., and Robert T. Fowler, for 30 years associated with Alexander Smith & Sons Carpet Company, Yonkers, N. Y., have been elected directors of the latter company. Richard Edie, Jr., treasurer; Thomas Ewing, Jr., vice-president; Williams Hertherington, president, and William F. C. Smith, of the Alexander Smith & Sons Carpet Company, and William D. Gardner, wholesale sales manager, and Joseph M. Hobbs, assistant retail sales manager of W. & J. Sloane, have been elected directors of W. & J. Sloane.



Guarantee Building Projects

A N important step in business service has been announced by the H. K. Ferguson Company, Cleveland, Ohio, international construction engineers, who have adopted a policy of guaranteeing buildings for five years. Every lump sum contract undertaken by the company on plans and specifications which they have prepared or approved for guarantee will include this clause: "The builder guarantees the work against defective workmanship and material for a period of five years after date of completion." No company has ever before guaranteed complete building projects for so long a period as a regular policy, according to Harold K. Ferguson, president of the company.



Upson Joins Chain Belt Co.

IT is announced by the Chain Belt Company, Milwaukee, Wis., that Charles H. Upson has joined the sales organization of that company and will have his headquarters at Cincinnati, Ohio, representing the company's entire line of Rex chain and transmission machinery.



SIX sizes, 4, 5, 6, 7, 8, and 10" widths x $\frac{13}{16}$ ", afford ample scope for adjusting the random or equal width styles of laying to any room area. Side-matched. Pegs and keys may be used, as illustrated, for effect only: they are not required.

Three grades: Mansion, Fireside, and Tavern. The last two, with their natural "defects", are very desirable. Sold on actual square foot basis, allowing a slight percent for waste, as determined by experience.

OAK FLOOR BLOCKS.
*CELLized provide a tight level design oak floor, at low cost. Complete units of 3 or more oak strips, in 6 $\frac{1}{4}$, 9 or 11 $\frac{1}{4}$ -inch squares. Laid in Everbond, a plastic cement, over wood or concrete, without nails.

STRIP OAK FLOORING is also *CELLized,—protected against shrinking or expanding.

All *CELLized Oak Products are unaffected by moisture, quickly laid, easily finished.

Solid Oak Floor Planks

***CELLized** ~ Cost no longer prohibitive

Wide solid boards that are unaffected by moisture—that will not cup or shrink—blind-nailed like strip flooring, and that will take the usual finishing processes!

All these factors, which greatly reduce the cost, and bring for the first time, solid Colonial plank floors within any flooring estimate, are due to *CELLizing. This deep-cell chemical treat stabilizes oak, and prevents distortion by moisture. It makes unneces-

sary the expensive laminating or veneering now resorted to in an effort to prevent movement in the finished floor. It permits a richer finish with less finishing materials, and easier nailing. Insect and decay proof.

As the cost is but little higher than the usual hardwood flooring, solid oak planks may now be economically laid in modest homes, clubs and similar buildings.



Sold through lumber dealers everywhere. Manufactured by the following:

ARKANSAS OAK FLOORING CO. . . . Pine Bluff, Ark.
TENNESSEE OAK FLOORING CO. . . . Nashville, Tenn.
NASHVILLE HDW. FLOORING CO., . . Nashville, Tenn.

BRADLEY LUMBER CO. of Arkansas . . . Warren, Ark.
E. L. BRUCE COMPANY Memphis, Tenn.
THE LONG-BELL LUMBER CO. . . . Kansas City, Mo.

Write for booklet
"Style in Oak Floors" to

***CELLized Oak Flooring Inc.**
MEMPHIS ~ TENNESSEE

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60%

More Durable

This statement is based on statistics furnished by the United States Forest Service. A frame is no better than its wood. Is it any wonder Bradley-Miller Frames made of Michigan White Pine meet with such great approval? They can be depended upon to stay put. They are not subject to rotting, warping, cracking or splitting. Made to last a lifetime.

Bradley-Miller frames come in two bundles made up of seven units. Give them to your carpenter and he can nail them up in less than ten minutes into the finest quality frame you ever saw. Builders like this saving in time and money.

Bradley-Miller
Michigan White Pine
Frames

Send
this
Coupon

Your dealer can supply you with Bradley-Miller Michigan White Pine Frames, in the patterns you like for any size opening, for any type of construction on the same day you order them.

Bradley-Miller Frames assure the dealer's reputation. If you are a dealer and do not carry Bradley-Miller frames, write us. Send the coupon today for full information.

BRADLEY-MILLER CO.
1200 Marquette St., Bay City, Mich.
Gentlemen: Please send me booklet describing Bradley-Miller Michigan White Pine Frames.

Name.....
Address.....
Dealer's Name.....
Address.....
Does your dealer handle Bradley-Miller Frames?.....

Machinery Companies Merged

THE merger of two well-known manufacturers of concrete and construction machinery, the Construction Machinery Company of Waterloo, Iowa, and the Marsh-Capron Company, of Chicago, has been announced by President H. B. Lichty, of the Construction Machinery Company. This merger has been effected for the purpose of bringing about economies of common management rather than for the elimination of either organization.

Both lines of equipment are to be continued as in the past and the sales and service organization of the two companies will remain intact. The long established sales and service policies of both companies will also be continued as in the past and careful attention will be given to the export field, as has been done heretofore.

The new arrangement will permit the manufacture of a complete line of tilting and non-tilting equipment under a single organization. Co-operation and exchange of information between the two engineering staffs is expected to bring about decided economies and advantages.



Organize Construction Committee

STRIVING to correct improper practices and to stabilize credit conditions in the building construction industry, representative sub-contractors and general contractors have joined in the Allied Construction Industries Committee, a new body recently formed at a meeting in Washington, D. C. Formal organization of the committee followed a series of preliminary conferences held at West Baden, Ind., Cleveland, Ohio, and Chicago, under the auspices of the Associated General Contractors of America.



Demonstrate Slate Making

BECAUSE of the great interest in slate manifested by visitors to the 1927 Own Your Home Exposition, the Bangor Slate Association decided to put on a real demonstration of slate making at the 1928 exposition at the Grand Central Palace, New York City. This exhibit included the sawing and splitting of blocks, trimming of the slate and finally nailing onto the roof. Sheets $\frac{1}{32}$ inch thick were split to show the flexibility of the material.

Each of the six houses surrounding the "Village Green" at the exposition were roofed with genuine Bangor slate applied in the manner best suited to the type of construction of the house. Two roofs showed a combination of 60 per cent blue-gray and 40 per cent colored slate, a combination which is growing in popularity each year.



One of the Houses Surrounding the "Village Green," at the New York Own Your Home Show, All of Which Were Roofed with Slate as a Part of the Bangor Slate Association Exhibit.

The Only Small Mixers with Handy Feed Chutes



For 28 years, Smith has been a leader in the developing of the many refinements that have brought Concrete Mixers up to their present Dependability, Ruggedness and Speed.



THE Smith Mascot 2 1/2-S Mixer and the 3 1/2-S Mixer have feed chutes into which it is easy to shovel. The Smith chute is low down—men do not have to shovel so high. They can feed a Smith faster and stay fresh right up to quitting time.

Faster Discharging

The Smith is the only true Tilting Mixer. It is discharged by a short pull of a lever, the batch shoots out, and the drum settles back in but a second, ready for the next batch. The seconds you save at every discharge mean more batches a day.



You, too, will find, as thousands have, that you can put far more concrete through a Smith per day.

Smith pioneered the machine mixing of concrete back in 1900 and reserved the rights to the now famous Double Cone Drum. Smith Mixers of 2 1/2-S, 3 1/2-S, 5-S and 7-S capacities are identical in principle and operation with the great Smith Mixers that leading engineers have insisted on for years for such projects as Exchequer Dam, Conowingo, Muscle Shoals, Jordan Dam, etc. These men know the Dependability and Speed of Smiths.

The T. L. SMITH COMPANY

1026 32nd St., Milwaukee, Wis.

Sales Offices and Service Stations in all Principal Cities

Catalog 528 gives full specifications and pictures of all the Smiths. In spite of their outstanding performance, Smith Mixers are not high priced. Mail the coupon for Catalog and Price Sheet **TODAY**.

SMITH MIXERS



Spray Painting Lowers Cost of Building

Today practically everybody knows that it costs less to spray-paint a building with DeVilbiss equipment than to brush-paint one. Contractors and painters who are familiar with the results also know that a DeVilbiss spray-painted surface is given a much greater protection than when the same materials are applied with a brush. The contractor who figures on brush painting, figures higher than the one who figures on spray painting, and the low figure delivers the better job.

DeVilbiss equipment gives you *all* the advantages of spray painting. A comparison of spray painting units will reveal to you the definite, specific features which constitute DeVilbiss Leadership. We will promptly mail you complete information about DeVilbiss equipment suitable for the general contractor and painter. Modernize your operation. Ask about it now.

THE DEVILBISS CO.

238 Phillips Ave., TOLEDO, OHIO

Sales and Service Branches

New York, Philadelphia, Cleveland,
Detroit, Indianapolis, Chicago, St. Louis,
San Francisco, Windsor, Ont.

Direct factory representatives in all other territories

DeVilbiss

Spray-painting System

Abrasive Companies Consolidate

RECENTLY the Manning Abrasive Company, Inc., Troy, N. Y., and Herman Behr & Company, Brooklyn, N. Y., consolidated under the name of the Behr-Manning Corporation. This consolidation combines the resources, technical knowledge and experience of two of the leading companies in the field of sandpaper and general abrasive products and is expected to contribute to quality of their many products and to the service available to customers.

No immediate change are contemplated in connection with the manufacturing or sales policies of either company except to establish closer contact between the manufacturing and technical organization. Both factories will be continued in operation as before and communications may be addressed to either.



Truscon Purchases Steel Company

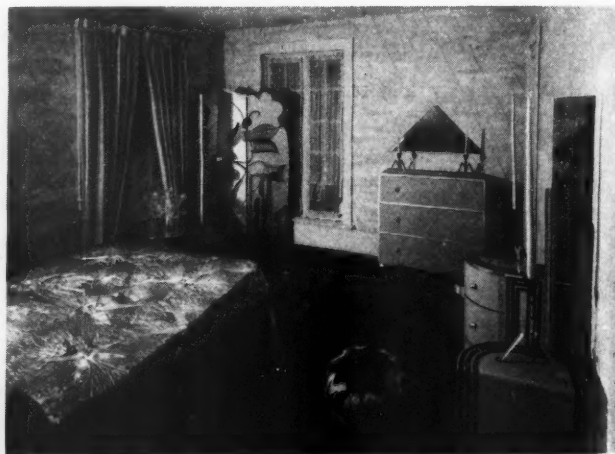
THE Hydraulic Pressed Steel Company, Cleveland, Ohio, has been purchased by the Truscon Steel Company, Youngstown, Ohio, and will operate it as its Pressed Steel Division. The entire plant is being completely modernized to insure the most efficient production. With this increase in facilities, the Truscon Steel Company will have one of the largest capacities for furnishing pressed and deep drawn steel of every description. The improvements are proceeding rapidly, and full productive capacity will be available shortly.



Students Erect Bungalow

AN English type, seven room, brick bungalow, built entirely by students of the Department of Building Construction of the Carnegie Institute of Technology, was visited by 11,782 persons in one night, according to a report from the Pittsburgh institution. The bungalow was one of the displays of the annual exhibition which attracts between 20,000 and 25,000 visitors yearly.

The bungalow was built, this year, in the masonry and bricklaying shop, under the direction of Charles W. Larkin, instructor. All work, including the masonry, bricklaying, carpentry, plumbing installation, electrical installation, plastering and painting was done by the students of the day and night classes. Several rooms were furnished especially for the exhibition through McCreery & Company, of Pittsburgh, and several industrial firms loaned electrical and plumbing apparatus for the occasion. It is expected that the bungalow will be torn down and replaced by another problem next year.



A Bedroom in the Seven-Room Brick Bungalow, Built Entirely by the Students of the Department of Building Construction of the Carnegie Institute of Technology.

Hot Bid



Check them all off

- No Material List to Struggle Over.**
- No Sets of Blue Prints to Buy.**
- No Worry About Leaving Out Items.**
- No Wasted Time in Finding Comparative Costs.**
- No Doubts As to the Accuracy of Your Bids.**

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Other HOLT BIDDERS Have Said

Clear and Accurate

"I received the HoltBid and found it perfectly clear to me after a few evenings' reading the HoltBidder's Instructions. I have checked it up and find it accurate far beyond my expectations." Exeter, N. H.

Uses While Learns

"Have finished about half of the HoltBid Instructions and like it very much. Already sold one house and figured several other buildings. I find in checking with houses we have completed that the HoltBid checks up very closely." Laceyville, Penna.

Most Complete

"In my fifty years of building, I have seen many estimating outfits but HoltBid is the most complete I have seen." Jackson, Miss.

Best and Instructions Very Plain

"I have been giving what time I could conveniently spare to the study of the HoltBid Method of estimating building costs and so far have found it to be the best method I have ever tried. I have not bothered yet about sending in any requests to your Service Department, because you have made your Instructions very plain indeed." Richmond, Va.

It's Great!

"Have just received my HoltBid System and wish to thank you for the layout. I think it is GREAT. I am enclosing \$5.00 herewith to prove my satisfaction as my first month's payment." New York, New York.

HoltBids After 7 or 8 Hours' Study

"I had not put in over seven or eight hours learning to HoltBid before I figured a house and sold it and came out about 2% to the good." Logansport, Ind.

RADFORD

The worst job in contracting or carpentering is estimating the cost. It is not only the most tedious work, it is also the most important—because the profit is determined before the job is even started.

HoltBid is a system that guarantees greater accuracy in figuring costs than any method that has ever been developed.

There is no stumbling block on the road to success that trips more men than inability to make accurate bids.

That is why HoltBid has met with such tremendous success—thousands of men are using it.

Holt



How often have you been in this predicament when you were pressed for time?
How many hours have you wasted in figuring up jobs that your competitor got?

Your Questions

The entire profit on a job is sometimes lost by the low-bidder because he left out some item in his estimate.

There is no chance for errors of this kind in using HoltBid. The HoltBid Forms preclude any omissions or losses through carelessness or oversight.

Practically every builder has spent money for plans only to have the customer switch to another design or not build at all.

HoltBid will save the expense of plans in developing a sale. All you need is floor plans and picture—such as shown in any plan book.

HoltBid

Honest Words of Praise

Pays For Itself

"Sold four or five houses and many smaller buildings, due primarily to the knowledge gained from HoltBid Service, so already feel fully repaid for the money spent with you."
Waterloo, Iowa.

Lands Nice Jobs

"Local attorney says the HoltBid Forms were the best specifications for contracts that could be gotten. I feel that the HoltBid had a lot to do with my landing a couple nice house jobs last year."
Amery, Wisc.

Even Easy For Beginners

"I sure appreciate your books because they explain in such detail that a beginner like myself should have little if any trouble to understand them."
Toledo, Ohio.

Promoted

"I want you to know that I feel the HoltBid System is largely responsible for my recent promotion."
 Fargo, No. Dak.

Not Difficult to Learn

"The HoltBid is well organized and am convinced that it is practical and absolutely reliable—not difficult to master—very much pleased—in the beginning I was skeptical as I could not see how it was possible to fit different localities—now I know I shall obtain great benefits and save hours of hard, tiresome estimating which has been my previous experience."
Littleton, New Hampshire.

Greatly Benefited

"It certainly is interesting and I feel greatly benefited already. Can see where it will make building a profession instead of a mere vocation."
Havre, Montana.



A HoltBidder can submit estimates in a fraction of the time required by old methods—and he will know his bids are absolutely accurate.

Answered Here

Sometimes a builder lets a profitable job slip through his hands because of lack of confidence in figuring the cost. He sticks to the ordinary jobs that he has done over and over.

Every table in HoltBid is based on actual figures. No approximating or averaging was done. A HoltBidder is competent to discuss building costs intelligently and snap up those chances that offer more than ordinary success.

One of Nature's laws is that no man may stand still—he either must progress or fall back. It is the natural instinct of every man to become independent and successful.

HoltBid will help you succeed because it increases your efficiency. HoltBidders have an advantage over all competitors that can neither be over-estimated or overcome.

Regardless of how much experience you may have had—how thoroughly you understand your work—you will admit you have got to keep up with modern methods in this day of keen competition.

HoltBid will enable you to make more money because it will assist you in keeping your business on the basis of service. It's the jobs that went to the other builder that gives you the feeling of failure.

After all, ability is the deciding factor in any profession or trade. There can be no success unless you know how to carry out your work as well as your fellow men.

We know that HoltBid is worthy of your investigation and that you owe it to yourself to give our method a personal trial. Order coupon on next page is for your convenience.

RADFORD

\$100 Brings HoltBid

For Your Examination *My Personal Guarantee*



I GUARANTEE that the HoltBid Method of Estimating Building Costs will be satisfactory to you in every respect. All I ask is that you give it a fair trial, and that is the only condition. If at the end of thirty days you do not find the HoltBid Method exactly as represented, I will refund the small down payment you have made. During the thirty days of free examination it is understood that our corps of expert HoltBidders will hold themselves in readiness to answer any question, and to give you true appreciation of the great value of the HoltBid Method. In accepting your order I place my full confidence in your intentions to give the HoltBid Method a fair trial.

WILLIAM A. RADFORD, President,
The HoltBid Service Company.

PIN A DOLLAR BILL TO THIS COUPON AND MAIL TODAY

William A. Radford, President,
HoltBid Service Company,
1827 to 1901 Prairie Ave., Chicago, Ill.

I would like to give your HoltBid Method a personal trial. I enclose herewith \$1.00 that you may send me the complete service on 30 days' approval under your money-return guarantee. If I keep the material more than thirty days it is understood that I wish to continue with HoltBid Service and will pay you \$5.00 per month until the full price of \$85.00 has been paid. The shipment I am to receive includes all units and a year's subscription to American Builder.

Name

Town State

Street Address.....Occupation

Note:—The service must be entered in the name of the individual and not the firm.

A.B. 7-28

(Without the American Builder, we shall deduct \$1.00 from the total purchase price. If you already are a subscriber, we can readily extend your subscription for a year.)

An Architectural Competition

FORTY-EIGHT countries are already represented in an architectural competition which will begin on September 1, 1928, for the selection of a design for a monumental lighthouse in honor of the memory of Christopher Columbus, that will be erected at Santo Domingo, capital of the Dominican Republic, in accordance with the terms of a resolution adopted at the Fifth International Conferences of American States. Before the opening of the contest it is expected that a considerable number of additional entries will be made. The entries of 699 architects have been received.

An international jury of three, to be selected by the competitors, will meet at Madrid, Spain, on April 15, 1929, for the purpose of selecting 10 designs from the entries. The authors of these designs will then recompute for the purpose of choosing a final decision. Each of the 10 architects whose designs are selected will receive \$2,000. There will be 10 honorable mentions of \$500 each. The author of the design placed first in the final competition will receive a prize of \$10,000 and will be declared the architect of the lighthouse. Second prize will be \$7,500; third, \$5,000; fourth, \$2,500, and \$1,000 will go to each of the other six competitors. The selected architect will, in addition to the prizes mentioned, receive a commission of 6 per cent on the first million dollars, 5 per cent on the second million and 4 per cent on all above two million dollars total cost of the lighthouse.



Kalman Opens Washington Office

A RECENT announcement states that the Kalman Steel Company has opened an office in Washington, D. C., at room 811 Barr Building, which will serve as a sub-

agency to the Baltimore district office. Mr. Howard M. Lloyd will be in charge of the new office and will act as sales engineer.



Name New Sales Manager

IT has been announced by the American Roof Truss Company, 5 N. La Salle St., Chicago, that R. C. Schwass, who for a number of years has been in charge of its western sales, has been made sales manager of its New York office, which is located in the Architects' Building, 101 Park Ave.



L. Mundet & Son, Inc., 461 Eighth Ave., New York City, offers a pamphlet on its Jointite cork tile for use in the smallest homes as well as the largest institutions.

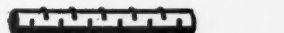
The Manning Abrasive Company, Troy, N. Y., offers a new pamphlet pointing out the importance of uniformity in sandpaper.

The Schlangen Bros., Co., 2435-2441 Irving Park Blvd., Chicago, has recently published a handsome new catalog, No. 10, covering its complete line of brass goods including builders' hardware, hose fittings, and special goods made from brass, bronze, aluminum and nickel silver.

"Kawneer Store Fronts" is the new Catalog M of the Kawneer Company, 2626 Front St., Niles, Mich., which contains very complete information, detail drawings, etc., on this company's store fronts.

"Structural Economies for Concrete Floors and Roofs" is a new publication offered by the Concrete Steel Company, 42 Broadway, New York City, which is a reference book for architects and builders on the subject of the type of construction known as the Havemeyer Truss Floor System.

Unusual Service for the Contractor



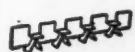
Round and Square Deformed Bars

High Chair

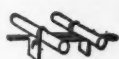


Lower Slab Bar Spacer

Bar Chair



Lower Beam Bar Spacer



Joist Beam Spacer

Welded Solid Steel Sash



Portable Electric Hand Saw

Ryerson combined service on all steel products saves time, money and trouble

The Special Contractors and Builders Division of Ryerson Steel-Service is without parallel in the building fields.

This department has its own warehouses and provides complete service on all reinforcing for concrete, Steel Joist, Metal Lath, Steel Sash, and all the various steel building products are also included.

In addition, structurals, bars, plates, sheets, rivets, bolts, wire, etc., are furnished from the general steel departments. Trench braces, jacks, electric drills, and hundreds of other tools needed on every job are supplied by the machinery and small tool departments.

Contractors use the Ryerson Warehouses as if they were their own. Reinforcing steel, lath, sash and other miscellaneous materials are kept under cover until they are ready to use each item. Delivery is according to their schedule.

Large fleets of trucks and private switch tracks help provide service unequalled by any other source of supply.

All types of jobs are figured and lump sum or pound price quotations prepared.

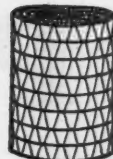
Write for Complete Information.

JOSEPH T. RYERSON & SON INC.

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BOSTON



Triangle Wire Mesh Reinforcing

Continuous Stirrups



Step Reinforcement

Spirals



Expanded Metal Reinforcing

Expanded Metal Lath



RYERSON REINFORCING-SERVICE

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

"Stair Builder's Guide," by Morris Williams, published by the Scientific Book Corporation, 15 E. 26th St., New York City, a new edition of which has recently been brought out is described as "A treatise on the construction of straight flight, platform, cylindrical and elliptical stairs, explaining the theory and practice so that the average building mechanic may understand it, with examples of work, ranging from the simplest to the most complex forms." Price \$3.

The Cincinnati Iron Fence Co., Inc., 3331 Spring Grove Ave., Cincinnati, Ohio, has published a handsome catalog very completely describing and illustrating its line of iron fences and gates.

"Installing Oil Heat" is the title of a new booklet published by the Oil Heating Institute, 350 Madison Ave., New York City, treating the subject of "Oil heat from the architects point of view," and prepared by C. Stanley Taylor, architect.

"End-Matched Softwood Lumber and Its Uses" is the title of a new bulletin published by the U. S. Department of Agriculture, containing the report of the Subcommittee on End-matched Softwood Lumber of the National Committee on Wood Utilization. It is the second of a series on the marketing and use of lumber and may be secured from the Superintendent of Documents, Government printing office, Washington, D. C., for five cents a copy.

"What Constitutes Roofing Quality?" is the title of a booklet by Lester Kirschbaum, B.S., Ch.E., published by The Flintkote Company, Park Square Bldg., Boston, Mass., which describes the manufacture of composition roofing.

The Shaw-Perkins Manufacturing Company, Pittsburgh, Pa., offers a catalog, No. 25, on its high convection radiators for steam and hot water heating, cooling, drying and industrial applications.

The Stewart Iron Works Company, Inc., Covington, Ky., offers a very complete catalog of its line of hand wrought iron and bronze, illustrating both modern and period designs in hardware, fixtures and furniture.

The American Engineering Standards Committee, 29 W. 39th St., New York City, has published its 1928 year book containing a description of standardization activities during the past 12 months and a list of new projects.

The Milwaukee Corrugating Co., Milwaukee, Wis., offers a new pamphlet, in colors on the subject of "The Spanish Motif in Roofs as Expressed by Milcor Spanish Copper Tile."

The Indiana Limestone Company, Bedford, Ind., has prepared a pamphlet under the title "Physical Properties of Indiana Limestone containing data correcting certain misunderstandings as to comparative values of various limestones."

The Truscon Steel Company, Youngstown, Ohio, offers a new booklet under the title "Window Beauty" on the subject of Truscon Standard Casements Model No. 5, containing full detailed information and illustrated with photographs and architectural sketches.

David Lupton's Sons Company, Philadelphia, Pa., has issued a new folder, "How to Get a Good Foundry," which describes the radical improvement in daylighting and natural ventilation of foundries with its products.

The Benjamin Electric Co., 120 S. Sangamon St., Chicago, has published a pamphlet catalog of its new line of electric refrigerator cabinets.

Only Genuine High Class Performance



Pays Big Money

You Get that with the

American Universal

FLOOR SURFACING MACHINE

You need look no further than the leading floor men in your city or any city. They'll tell you that the "American Universal" gives genuine high class performance and that pays big money. Ask for a demonstration.

Send the coupon TODAY

The American Floor Surfacing Machine Co.
515 So. St. Clair St., Toledo, Ohio

GENTLEMEN: without obligation please send me complete information about the American Universal.

☐ I am a Contractor. ☐ I am interested in Floor Surfacing as a Business.

NAME.....

STREET.....

CITY..... STATE.....

**Read this Page. It Means
your Success**

DO YOU WANT BIGGER PROFITS?

Sell and Install Porstelain Tile

This new low cost, high quality tile makes a beautiful, permanent job, equal to clay or composition tiles in every way.

It is the answer to the demand for a tile that will give greater satisfaction at less cost. A tile that anyone can install; a tile that will not crack, one that is beautiful and has a lasting finish.

Porstelain
TRADE MARK REG. U.S.A.
System of Standard Wall Tile

A new and practical method of securing tiled walls that are colorful, sanitary, heat and moisture-proof and non-cracking.

Not Just a Wall Surfacing Finish

Porstelain Tile makes a complete insulated wall when installed. They can be applied directly to studding or hollow tile or over the existing walls.

Porstelain Tiles are pressed out of sheet steel (resembling shallow, oblong pans) and coated with a hard, indestructible, china-like surface of porcelain enamel.

Made in standard sizes and a wide variety of colors. Each tile is a separate unit and is set individually on a grooved base.

**We Want One Energetic Builder in Every Community
to Specialize in Porstelain Tile Installation**

A Small Investment Starts You

Every new and old home is a live prospect. Old bathrooms and kitchens can be modernized and beautified with this new patented tile.

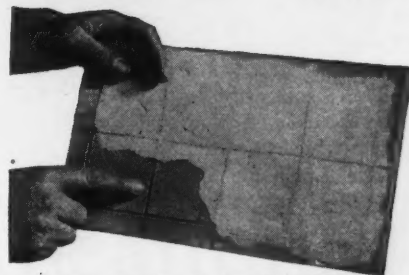
No Experience Required to Install Them

You or your men can do the work with a speed that is surprising. This is the opportunity of a lifetime to start a business of your own; a business that will grow year by year. Get in while the field is new. We are ready to help you.

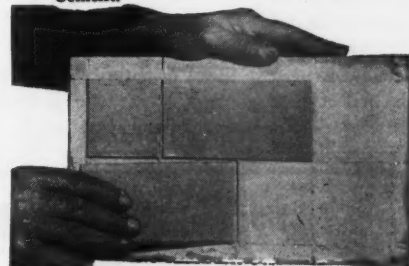
Write Us Today. Your Territory Won't Be Open Long

PORCELAIN TILE COMPANY

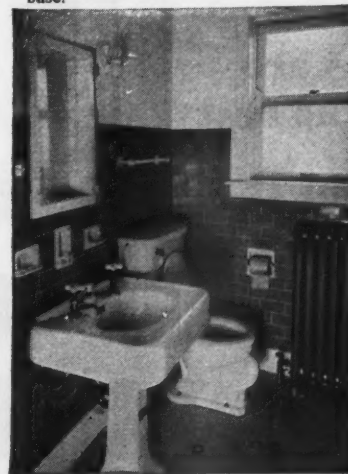
BUILDERS BUILDING, WACKER DRIVE AT LA SALLE STREET
CHICAGO, ILLINOIS



First operation in installing Porstelain Tile Walls. Foundation sheet covered with thin coat of Porstelain Cement.



Second operation, setting tile in cement-filled grooves of insulating base.



**This Coupon
Brings Complete
Information. Mail
it at once.**

PORCELAIN TILE COMPANY

Builders Building, Wacker Drive at La Salle St., Chicago, Ill.

Please send me complete information.

Name.....

Address.....

City..... State.....

Books, Bulletins and Catalogs for You

THE literature and publications listed here are available to the readers of American Builder. They may be obtained from the firms mentioned and will be forwarded without cost except where a price is noted.

Geo. L. Mesker & Co., Evansville, Ind., has issued a pamphlet on the subject of the standard steel hangers which it has developed and placed on the market to meet the rapidly increasing demand from airports and flying fields throughout the country.

The Vento Steel Sash Company, Muskegon Heights, Mich., has prepared a pamphlet covering the styles, sizes, construction and application of its puttyless steel windows.

The Clinton Metallic Paint Company, 558 Clinton Road, Clinton, N. Y., has published new literature on the subject of the use of Clinton cement colors, including two booklets, "Color in Stucco" and "Color Suggestions for Brickwork," and a circular, "Clinton Mortar Colors."

The Sisalkraft Co., 228 N. La Salle St., Chicago, offers a pamphlet describing the use of the reinforced, waterproof paper which it manufactures.

The Louisville Cement Company, Incorporated, Louisville, Ky., has published a booklet on the subject "Brixment for Stucco" which contains full instructions for this use of its product.

E. C. Atkins & Company, 402 S. Illinois St., Indianapolis, Ind., has published a new catalog, No. 20, in a de luxe edition, in hard covers, covering the complete line of saws, saw tools and machine knives which this company manufactures.

The Midwest Steel & Supply Co., Inc., Bradford, Pa., has issued a new pamphlet on the subject of "Midwest Steel Stringers for the Modern Factory."

The Pyramid Metals Company, 2014 Wabansia Ave., Chicago, offers a circular, entitled "There's a Hole in Your Window Four Inches Square," which presents the important service rendered by its weatherstrips.

The Roe Safety Door Corporation, 1260 Builders Bldg., Chicago, offers a pamphlet illustrating the various types of safety door which it manufactures for home protection.

The Dovetail Anchor Slot Company, 660 Builders Bldg., Chicago, offers a pamphlet illustrating the application of the Dovetail masonry anchors which it manufactures.

The Concrete Reinforcing Steel Institute, 435 N. Michigan Ave., Chicago, has published, in the form of a booklet, the "Proceedings of Fourth Annual Meeting, Biloxi, Mississippi, March 19-21, 1928."

The Bogert & Carlough Co., Paterson, N. J., offers a new catalog J-28 under the title "Boca Solid Steel Projected Windows," which illustrates its various types of steel window.

L. Mundet & Son, Inc., 461 Eighth Ave., New York City, has prepared a pamphlet on the subject of the "Mundet Jointite Cork Tile" for small homes as well as the largest institutions.

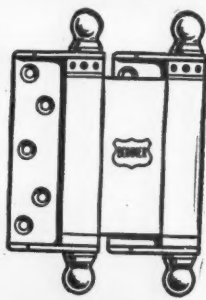
The Autocar Company, Ardmore, Pa., has published a new booklet under the title "Autocar Car Trucks for Hauling Building Supplies," which contains some interesting information, including an extensive list of Autocar users in the building supply field.

The Cork Import Corporation, 345-349 W. 40th St., New York City, has published two new pamphlets, "Novoid Corkboard Insulation" and "Novoid Cork Covering—For Refrigerated Lines and Tanks and Drinking Water Systems," containing useful information on the use of its products.

Bommer

Spring Hinges

are
the best



to
use

Millions and Millions

of People are Pushing
Them
whenever they open a door

Follow the line of least resistance
Use **Bommer** Always
They are the best

Bommer Spring Hinge Co., Brooklyn, N.Y.





Panelboards

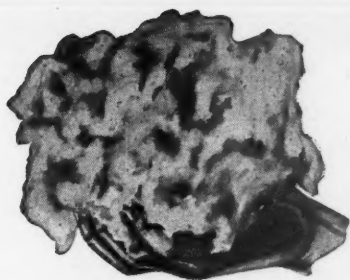
When the House is Sold—

⑦ Panelboards help sell the houses you build as well as give you lower labor costs in the installing of them. Whatever the size or type of building there is an ⑦ Panelboard for it.

Send for catalog and estimates. Free of course.

Frank Adam

ELECTRIC COMPANY
ST. LOUIS
Offices in Thirty Cities



Insulates Best Says U. S. Bureau

ON YOUR next job, insulate with Gimco Rock Wool. Not only insulates against cold and heat, but also against FIRE, water, vermin and SOUND. Rock wool is listed by the U. S. Bureau of Standards as the most efficient 100 percent fire proof, chemically stable insulator known today. Approximately 90 percent of its volume is DEAD AIR space.

Gimco
ROCK WOOL

Gimco is Rock Wool at its best. It is produced by drawing molten silica rock into fine, long fibres by a special process which also anneals the fibres, making them tough, elastic and waterproof. This silica rock is found in only one community—Alexandria, Indiana.

3 CONVENIENT FORMS

Gimco Rock Wool is available in three convenient forms to meet every need and requirement of installation—Loose; Felted (which we term Flexfelt) and Granulated Rock Wool.

1. **LOOSE ROCK WOOL**—Light, fluffy and easy to handle. Wonderfully adapted for insulating walls and attic floors in new homes or attic floors in old homes. Tucks in easily and quickly between joists or studding. Packed in handy 50-pound bags.

2. **FELTED ROCK WOOL (Flexfelt)**—Easy-handling, blanket-like form in varying thicknesses. Fabricated between metal lathe, providing stucco base when used on outside and plastering base when used on inside.

3. **GRANULATED ROCK WOOL**—Loose Rock Wool ground into uniformly small particles. Ideal for hard-to-get-at, inaccessible applications. Just open handy 50-pound bags and pour in where desired.

Ask your building supply dealer about Gimco Rock Wool. He can show you samples and quote you prices. If your dealer doesn't handle, write us direct.

Low Cost Will Surprise You!

A better insulator at a lower cost! Hard to believe, but it's a fact. Don't pay fancy prices for ordinary insulators when you can get Gimco Rock Wool at surprisingly low cost.

Get All
the Facts—

Send To-day for New Book!

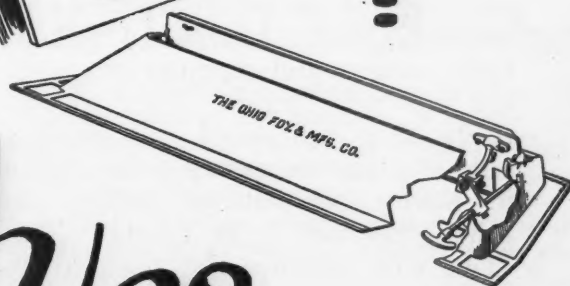


General Insulating and Mfg Co.
Alexandria, Indiana Send copy of
free book on Rock Wool Insulation.

Name _____
Address _____



Beautiful!
But Will It
WORK
?



Yes

That is the answer to the prospective home owner's query. A fireplace that actually functions as a heating unit presents a great appeal to all home lovers. We manufacture a complete line of fireplace equipment, from gas logs, gas heaters, andirons, portable fireplace baskets to dome dampers, etc. All are fully guaranteed. We invite you to inspect our line. Coupon below brings our illustrated catalog.

The Ohio Foundry & Mfg. Co.
Steubenville, Ohio

Established 1846

THE OHIO FOUNDRY & MFG. CO.
Steubenville, Ohio.

Gentlemen: Please send me your catalog.

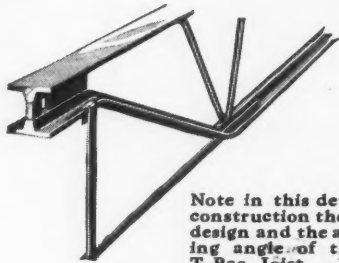
My Dealer's name is.....

Name.....

Street.....

City.....State.....

T-Bar JOISTS



Note in this detail of end construction the rigidity of design and the ample bearing angle of the Genfire T-Bar Joist. Method of attaching furring bar for lath is shown.

In Keeping with Modern Construction Practice

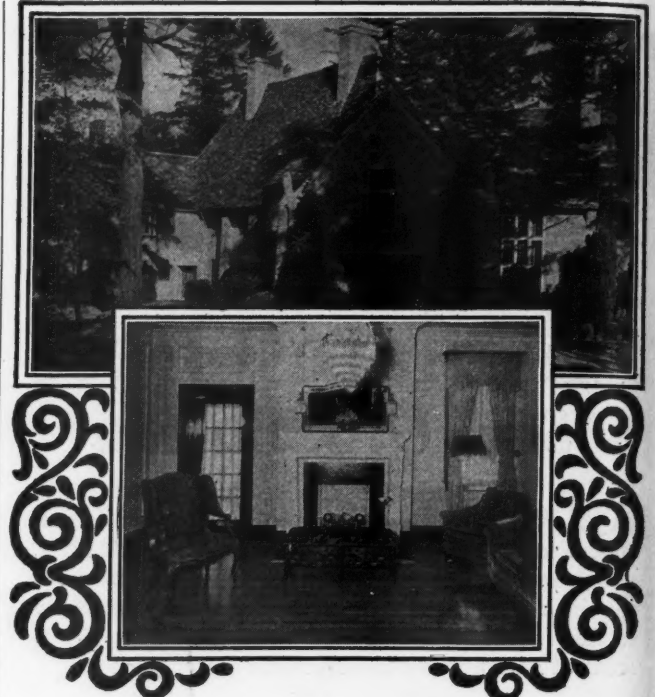
In a great many instances you will find that Genfire T-Bar Joists can be used to great advantage where it has been customary to use wood. Their light weight and unusual strength are important factors. They are entirely shop fabricated and require only the time necessary to lay them in place. No cutting, fitting, or other operation is necessary. The open web permits the passage of piping and conduits. When building several stories, the T-Bar Joists serve as working platforms and any number of floors can be constructed at the same time. Remember, too, that because these joists provide a light weight construction a corresponding saving can be made in the sub-structure.

Estimates and literature on request



GENFIRE STEEL COMPANY
YOUNGSTOWN, OHIO

Manufacturers of a Complete Line of Firesafe Building Products,
also Waterproofings, and Concrete Preservatives
Branches in All Principal Cities. Dealers Everywhere.



OAK FLOORS enhance their value

Houses laid with "Perfection" Brand Oak Flooring command a better price on the open market.

You can depend upon "Perfection." In two modern plants operated by skilled lumbermen, only the finest oak is selected. After proper seasoning and kiln-drying, it is perfectly milled and matched so that it lays smooth and stays smooth. It is graded and handled so carefully that upon arrival anywhere, it is always in perfect condition. Leading lumber dealers gladly feature this nationally advertised brand.



There's a size and grade for every structure, new or old,
Write today for full particulars.

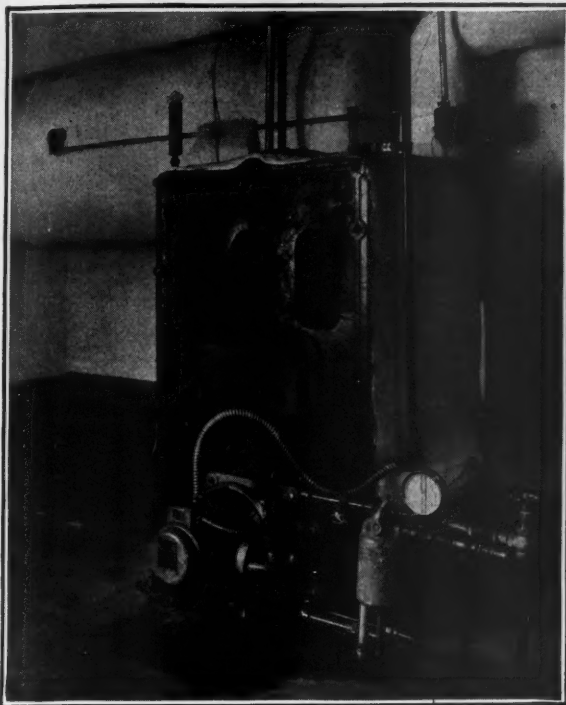
ARKANSAS OAK FLOORING CO., Pine Bluff, Ark.

'PERFECTION'

Brand Oak Flooring

"Perfection" Brand Oak Flooring, Blocks and Planks, may be obtained chemically treated by the "CELLIZED" process.

Burnham Boilers



This Burnham High Pressure Boiler fired with oil, is the hot water supply unit at the Carolyn Apartments, Mamaroneck, N. Y. Adrian P. Bedell, Architect.

Burnham's Shorten Fuel Oil Costs In Two Ways

AT the super-modern Carolyn Apartments in Mamaroneck, two Big Twin Burnhams, fitted with oil burners, are used for heating.

Their fire travel is three times as long as the boilers themselves.

It's this long fire travel that makes the short oil bill.

This also is true of the Burnham High Pressure Boiler for hot water supply.

It has the same ability to baffle down the long shooting flames of oil, burned under pressure.

It gives the same fuel savings that recommend its big brothers, no matter what fuel is used.

And like them it is of cast iron, free from seasonal repairs.

Get the full facts in Catalog No. 67

Burnham Boiler Corporation

Irvington, New York

Representatives in all principal cities of the United States and Canada

Read this letter!

W. H. EBERHARDT
GENERAL CONTRACTOR

1808 MATILDA STREET
PHOENIX 12-5075

Dallas, Texas, April 12, 1927

DeWalt Products Co.,
Leola, Penna.

Gentlemen:

I have been using the DeWalt Wonder worker on my jobs since the first of December, 1926 and can truthfully say it is a wonderful labor saving machine. On one job it has saved me \$300 worth of labor and material. 75 to 80% of all my saving for building residences and apartment houses are done on it. Does all my studs, roofs, bridging, trimmers, headers, storn sheathing and shipplap between the openings. Selecting all my window jamba from #2 material, I have sized them, straightened them, ploughed, dadoed and mortised them for pulleys; put a back-bone mould on my casing and base. Have made all my cabinet doors, panel doors, glass doors, screens; out cut and nosed stair treads, routed out the stringers, rabbetted my door jamba and sized them. Besides this, the DeWalt cuts hundreds of blocks that go into every good size building.

I make my own medicine cabinets out of scrap material at odd times and they cost me nothing but the plate glass.

I know of no better way to cut down the cost of building than to facilitate high price labor and I feel very grateful to the young man who persuaded me to buy this handy woodworking machine.

Yours very truly,

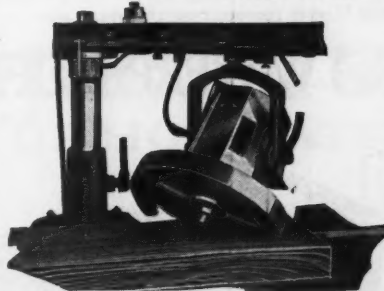
W. H. Eberhardt

Texas Builder

tells why DeWalt is the Ideal Woodworker

The DeWalt is the only overhead, direct drive, universal woodworker on the market. It is the most flexible machine made. To change from cross-cut to rip, to bevel, to bevel rip, to miter, to compound miter, can all be done without stopping the saw. To change to dado, mortise, routing, shaping, tenoning or ploughing tool takes but one minute. Cuts studs and jack-rafters at speed of 30 in 6 minutes. Routs complete stair of 14 risers in 12 minutes. It's portable. Two men carry it easily. Pays for itself on 3 average houses in time, labor and material saved.

The DEWALT Wonder Worker The Ideal Saw for Builders



Flexibility Plus!

Motor can be tilted to any bevel. Crane swings to any miter and moves up and down. Yoke slides forward and back and swivels. No tilting table. Any cut can be made with work lying flat and layout marks in full view.

Write for DeWalt Builders' Catalog

DEWALT PRODUCTS CO., 667 New Holland Ave., Leola, Penna.

I understand your Builders' Catalog will tell me all about the DeWalt. Please send it at once.

Individual.....

Firm.....

Address.....

FAMOUS ACHIEVEMENT!

Here is a machine which fills a long-felt want—a woodworker to which the individual motor drive principle has been applied.

Equipped with five motors, each with its own starting switch, it provides a complete equipment of woodworking machinery without belts or clutches. It has every good feature for which the FAMOUS Woodworker has been long noted—with the additional advantages which only individual motor drive for each unit can produce.

No belts to shorten or replace when they become worn—

No clutches to adjust—

No possibility of small pieces of waste material falling into belts or driving mechanism—

All of these features are offered at a cost only slightly higher than the belt driven machine.

WRITE FOR DESCRIPTIVE BULLETIN TODAY!

THE SIDNEY MACHINE TOOL CO.

857 Highland Ave., Sidney, Ohio



BUILDERS
of
GOOD MACHINERY
SINCE 1904

This Stucco House Can Never Leak or Crack

In order to permanently preserve the beauty of this house and insure a dry interior, the stucco was hardened and waterproofed with "ANTI-HYDRO." It cannot leak, and the stucco is so hard it will never crack or chip.

In addition to its hardening and waterproofing qualities, "ANTI-HYDRO" has many other advantages. It so enriches the mixture that the mortar sticks firmly to walls and prevents sliding, so that workmen can plaster 50% more surface in the same time as when using plain cement mortar. It insures a perfect bond to tile, brick or concrete. And any tone may be obtained by adding dry mortar color. "ANTI-HYDRO" may also be used with white cement and white sand without dimming or changing the color.

"ANTI-HYDRO" is a liquid compound and therefore easy to use. It mixes readily with the water used to wet down stucco. For 24 years it has been the outstanding concrete hardener and waterproofer. Results are guaranteed permanent. Use it on your next job.

ANTI-HYDRO WATERPROOFING Co.

265-269 Badger Ave.

Newark, N. J.



J.L. OAKLEY RESIDENCE, SAN BERNARDINO, CAL.
HOWARD E. JONES, ARCHT.—CHARLES SCHMIDT, CONTR.





KIMBALL ELEVATORS *for* Permanent Building!

SAFETY---SERVICE ---and ECONOMY

LONG life and good service are two outstanding characteristics of Kimball Straight Line Drive Elevators. Nearly half a century of such service has brought many complimentary letters to us. Mr. F. D. Higginbotham, Manager of the Dooly Block in Salt Lake City, writes:

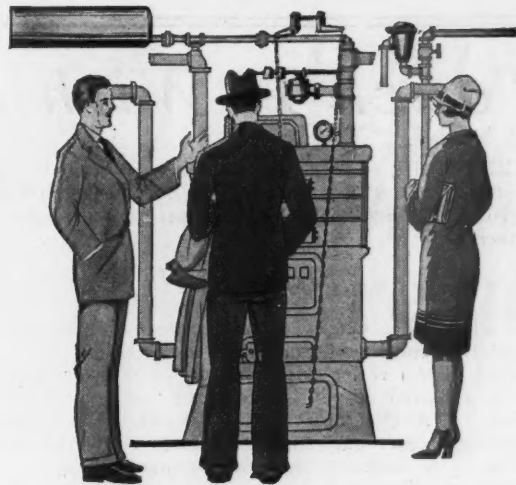
"In the month of October, 1914, Kimball Passenger Elevators were installed in this building. They have a capacity of 2500 pounds and a speed of 300' per minute. We have not been without service a single day during thirteen years."---This is just one example of Kimball Superiority.

Inquire about Kimball Straight Line Drive passenger and freight elevators---motor and machine assembled as an integral unit. Permanent alignment of motor and machine guaranteed.

Valuable descriptive pamphlets sent free upon request.

KIMBALL BROS. CO.
989-97 Ninth St., Council Bluffs, Ia.

*Elevator Builders for
45 Years*



HOME BUILDERS *know*

HOME ENJOYMENT has a cash value for you---when it's one of your satisfied clients who's telling all of his friends about the wonders of his new home---and satisfaction all hinges on heating!

Better Heat---Easier Sales!

Your homes should be built *around* the heating plant, for it is the heart of the home. Choose a well designed Hot Water Heating Plant, Thrush Regulated, and you'll build friends as well as houses. Ask us about it---we will send you full details.

H. A. THRUSH & CO.
PERU, INDIANA

H. A. Thrush & Co.
Dept. B. Peru, Indiana

Tell me about the mild, healthful, uniform heat which Thrush Regulation economically provides.

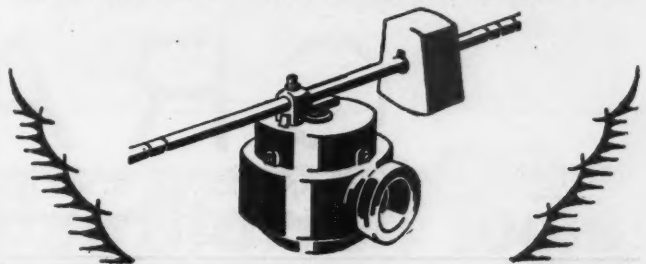
Name _____

Address _____

My Plumber is _____



THRUSH SYSTEM OF HOT WATER HEATING



Touch It With a Ten Foot Pole—

REMEMBER the old saying "You can't get near enough to touch it with a ten-foot pole"? That applies to the Improved Schlueter when you compare it with other floor surfacers.

Not One!

For what other has even half of the features that have made the Improved Schlueter the peer of Floor Surfacers? Steel roller adjusts itself to floor irregularities (by a patented suspension feature). 2. Link Belt chain drive. 3. Baldor motor made especially for surfacing machines (can't burn out). 4. Positive suction gathers all dust. 5. Surfaces right up to quarter-round. 6. No weight to adjust. 7. No levers to manipulate. 8. Five Year Guarantee.

Compare the Work

You may have the Improved Schlueter for a Five Day Free Trial. Use it as often as you wish. Compare it with any other. If it isn't definitely superior send it back. The Improved Schlueter is always **bought** because of the actual work it does. It is never **sold**. Write for details of Free Trial Offer and Easy Payment Plan.

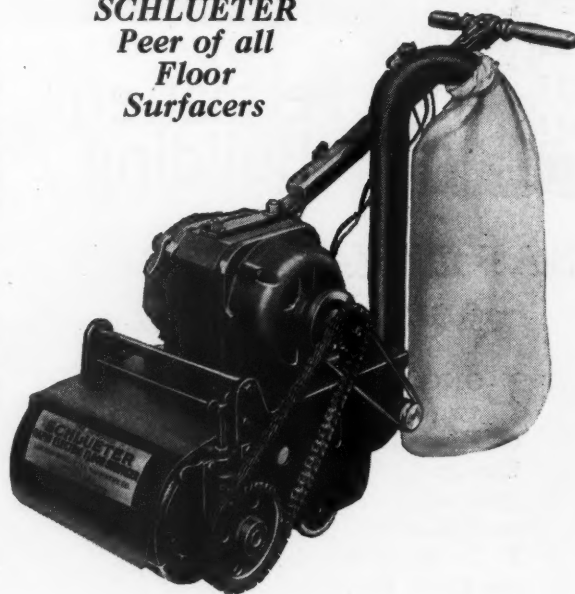


LINCOLN-SCHLUETER
FLOOR-MACHINERY CO., INC.

222 W. Grand Ave.

Chicago, Ill.

The
Improved
SCHLUETER
Peer of all
Floor
Surfacers



150 Pounds Pressure



CRANE VALVES



2500 Pounds Pressure

NOW! Crane fixtures in color as well as in glistening white

Cheerful pinks and yellows, gleaming ivory and soft tans, greens and blues enticingly cool as lake water on a summer's day; Crane Co. now offers a complete line of plumbing fixtures in colors as well as in glistening white.

Twice-fired vitreous china fixtures may be had in white or in a choice of seven colors; solid porcelain in white or in eight colors;

porcelain enameled iron in white or in ten colors.

The new Crane color fixtures are a distinct contribution to the art of decoration in bathroom and kitchen. The fixtures themselves may be seen at the nearest Crane Exhibit Rooms. Or a request will bring complete information.

CRANE

CRANE CO., 836 S. MICHIGAN AVE., CHICAGO, ILL.

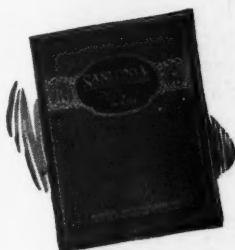
Branches in all principal cities

A WOMAN may look ever-so-carefully into this room and that. But, after all, it's her impression of the kitchen that makes or loses the sale. And next in importance comes the bath-

room.
Use SANI

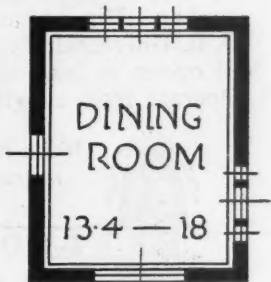


ONYX, the modern wall material in both of these rooms. Fused from rock ingredients, it doesn't crack, chip, check or discolor. No repairs or redecoration. It means a certain sale!

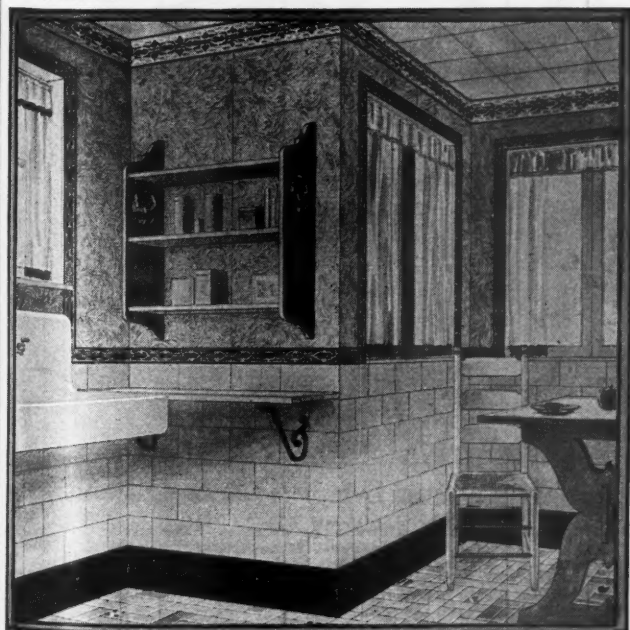


You ought to have this book; it tells all about SANI ONYX, and shows actual installations in full color. Write for your free copy.

We have some choice territory available for Construction Houses or representatives. Write us.



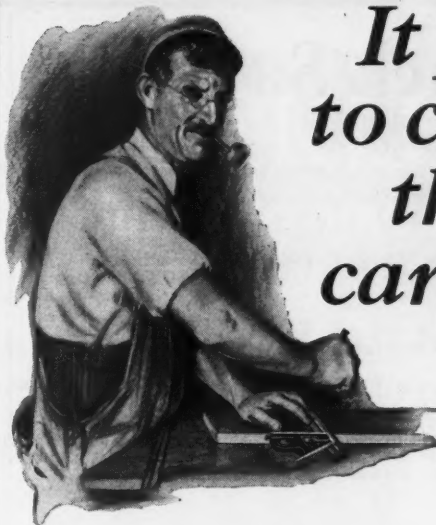
—but *THIS* is the ROOM that Sells Her—



SANI ONYX
A VITREOUS MARBLE

MARIETTA MANUFACTURING COMPANY
80 Brookside, Indianapolis, Indiana

*It pays
to choose
them
carefully*



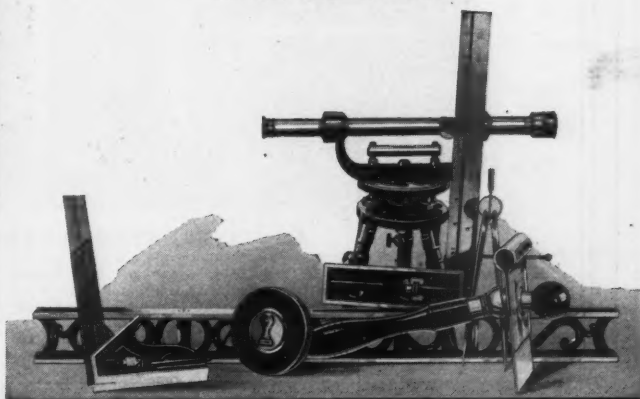
Second rate, cheaply made tools are no bargain no matter how low the price. There's lasting satisfaction as well as true economy in the long run in quality tools —tools you're proud to own.

Your dealer has a full line of Starrett tools, tapes, transits and levels. Look them over. See for yourself why their makers are recognized as the world's greatest toolmakers.

Catalog No. 24-6 describes over 2500 Starrett Tools. Write for a free copy.

THE L. S. STARRETT CO.

World's Greatest Toolmakers
Manufacturers of Hacksaws Unexcelled
Steel Tapes—Standard for Accuracy
ATHOL, MASS., U. S. A.



Use Starrett Tools

2003

Wodack Saws—"A Wonderful Investment"

FROM NEW JERSEY

"This saw certainly was a wonderful investment for us. Saved \$147.60 on one house."

J. SMETTS & SONS,
New Brunswick, N. J.

FROM KANSAS

"We like the saw very much, as it sure will do the work."

ARMAGOST & SON,
Wichita, Kan.

FROM TEXAS

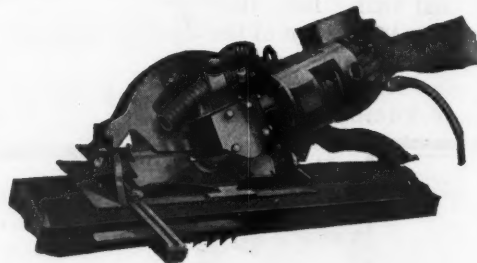
"We have found many uses for this saw—has been an asset to our business."

J. E. METCALF & SON,
Corsicana, Tex.

FROM WISCONSIN

"... have wished many times that the hours I spent sawing by hand could have been done with your power saw. I use it for everything—to make work easier."

OTTO F. RUPNOW,
Wauwatosa, Wis.



Model "B" for Bevel Cuts

Wodack Electric Hand Saw may be had in 3 models. Model "B" has tilting base for bevel cuts to 60°. The 11" diameter blade cuts $4\frac{1}{8}$ inches, giving saw ample capacity for deep bevel cuts on 2" and 3" lumber. Rip and depth gauges. $\frac{3}{4}$ h.p. G. E. Universal Motor for A. C. and D. C. 60 cycles or less. Perfect Safety Guard. Operate from neighbor's light socket.



Write today for name of
nearest demonstrator

F.L. ROGERS & CO.

23 S. Jefferson Street
CHICAGO, ILL.



2 Tools in 1

Combination Lock Mortiser and Router

Cuts out both face-plate and barrel of a door lock in one operation without stopping. Will cut 60 doors in one hour. If desired Router sold separately. $\frac{1}{2}$ h.p. G. E. Universal Motor.

Contractors!—We can help you sell!



AN "INTERNATIONAL" FRONT at BATON ROUGE, LA.

It may be that in your territory most of the large building contracts have been let for the season—but how about the store front business! Now is the time when merchants are preparing for their Fall selling effort, and a well planned store front, built for good display of their merchandise, will prove a sound investment.

Hundreds of contractors all over the country have used International Service to their profit in landing store front contracts. We will supply designs and estimates *free of charge* to all reliable contractors who appeal to us for this service. Write today for further information, and ask for our illustrated steel catalog.

PRODUCTS of INTERNATIONAL

Store Fronts - Steel Columns
Steel Ceilings - Skylights
Steel Windows
Steel Girders - Steel Trusses

INTERNATIONAL STEEL & IRON COMPANY

DEPARTMENT 18
EVANSVILLE INDIANA

PRODUCTS of INTERNATIONAL

Sidewalk Lights - Coal Chutes
Public Garages - Roof Ventilators
Airplane Hangars

—and many more listed in our Catalog!

WALL-TEX

would have
prevented
this!



It's worth while to take extra care in finishing the walls and ceilings of a room. You know they'll stay as handsome as you make them. Use Wall-Tex—your customers will have no regrets, no repair bills to pay. It is good business to do work that gives such satisfactory service.

Wall-Tex is a flexible fabric wall-covering, almost impossible to crack. For new homes, where walls and ceilings often settle, accompanied by plaster cracks, nothing can equal Wall-Tex. In old homes, where plaster is in bad condition, Wall-Tex helps to strengthen it, and hides the cracks.

Whenever Wall-Tex is applied, there is an added assurance of satisfaction. The beauty of Wall-Tex doesn't fade. Spots, finger marks, furniture scars, the collected grease and grime of city air, even, cannot disfigure Wall-Tex permanently. It can be wiped clean time after time with a damp cloth.

Wall-Tex comes in 48" width, and it is hung just like wall-paper. New patterns are constantly added to keep the line up-to-the-minute. Every design in the sample book has proved its popularity. You can find there Wall-Tex numbers to harmonize perfectly with any decorative plan, for any room in a home. Both dull and glossy finishes. And plain Wall-Tex which makes an ideal base for the applied finishes so popular in modern decoration.

Architects, builders and decorators can use this modern wall-covering to advantage. For information on your particular requirements, write The Columbus-Union Oilcloth Company, Columbus, Ohio.



WALL-TEX

PERMANENT
WALL-COVERING

PEERLESS

Building Specialties

PEERLESS

In-the-Ground Garbage Receiver



Sanitary
Odorless
Fly-Proof
Out-of-Sight

A CONVENIENCE THAT SELLS HOMES



The Peerless In-the-Ground Garbage Receiver is made in three sections; a copper steel rust-resisting outer casing or shell with its attached cast-iron lid and the galvanized iron pail which fits inside. A slight downward pressure of the foot upon a handy foot-trip raises the lid; remove the foot and lid closes. Home seekers are quick to notice these little items about a prospective home, and they cost you so little to install. Peerless In-the-Ground Garbage Receivers are made in four convenient sizes. Write today for complete details and prices.

WE MANUFACTURE A COMPLETE LINE

of Fireplace Furniture—Andirons, Fire Sets, Screens, Baskets, Coal Hods, Grates and Fireplace Dome Dampers.

Coal Windows, Package Receivers and the Peerless Hearth-Fyre Gas Heaters. Send the coupon below for complete details and prices on one or all of the above Building Specialties.

PEERLESS MANUFACTURING CO.

324 W. MAIN ST.
LOUISVILLE, KENTUCKY

PEERLESS MFG. CO.,

324 W. Main St., 7-28
Louisville, Ky.

Kindly Check

☐ Contractor ☐ Architect
☐ Home Owner ☐ Dealer

Please send me complete information on your Garbage Receivers. ☐ Other products.

Name

Address

Town State

ACCEPT NO SUBSTITUTE

Sterling

—“rivet assembly” instead of bolts keep the legs rigid.

There should be more to a wheelbarrow than simply a tray, with a wheel, two legs and a couple of sticks hitched on. More than just any old perambulator made to sell cheap. There should be more—and *there is more*—you'll find it *only in a Sterling*. This one feature, shown here, will make you three times as much money in longer service and less repairs than you could ever save by buying any other barrow. *Why take a chance—others don't.*

Leading Hardware and Equipment dealers have Sterlings—or they can get them quickly from complete stock warehouses at Chicago, New York, Philadelphia, Pittsburgh, Cleveland, Detroit, St. Louis.



[— lower barrow
cost per job—less
repairs — longer
life.]

STERLING WHEELBARROW COMPANY

STERLING ON A WHEELBARROW MEANS MORE THAN STERLING ON SILVER

Milwaukee

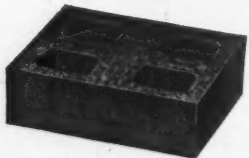
Wisconsin



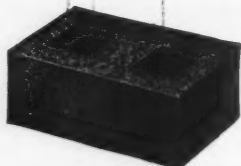
8x8x16
Block 3-Core



8x8x16
Block 2-Core



5x12x16
Tile



5x8x12
Tile

All these concrete masonry units made on one machine—

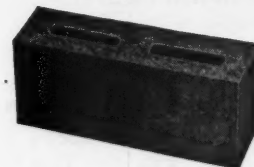
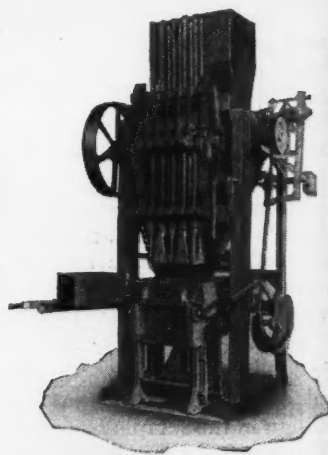


Self-Contained Vertical Power Stripper

Here is the newest thing in power machinery for the rapid and economical manufacture of concrete block and tile. It is entirely self-contained—when it arrives at your plant you skid it into place, hook on a belt and you're ready to start operations. A power feeder that works automatically, power tampers that cut labor cost and insure a uniformly dense product. Only one clutch on the whole outfit and that one has a light job.

For the builder who is interested in establishing a concrete products plant with not too great an investment but whose trade requires a variety of sizes and types of masonry units, this outfit will be especially valuable.

Write for the Ideal catalog describing hand and power block, brick and tile machines, mixers and ornamental molds.



5x4x12
Tile

This stripper also makes blocks 8x10x16 and 8x12x16 and tile 5x6x8.

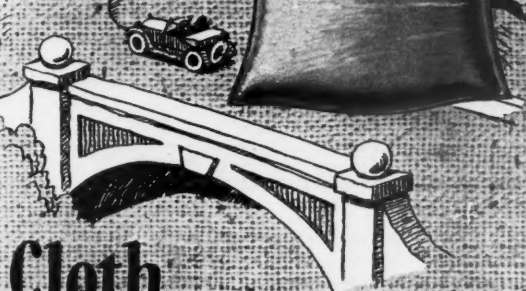
IDEAL

CONCRETE MACHINERY

DIVISION OF
CONSOLIDATED CONCRETE MACHINERY CORPN., ADRIAN, MICH.

Cloth

the
economical
cement
package



Cloth

cement sacks are like
money in the bank.
Non-returnable
bags are like money
destroyed by fire—
Order *always* in
returnable sacks

TEXTILE BAG

MANUFACTURERS ASSOCIATION
7310 WOODWARD AVE., DETROIT, MICH.



Reading Architects' BLUE PRINTS



Learn at Home!

THE building trades are booming. Employers everywhere are looking for men who can read architects' blue prints. Splendid salaries and rapid advancement are offered men who have this special training.

There is an easy, delightful way to learn. The International Correspondence Schools will teach you right at home in an hour a day of the spare time that now goes to waste.

You will like the course because it is so PRACTICAL. You work on actual blue prints—the same blue prints a contractor would use if asked for an estimate, or a foreman would receive from a contractor.

In a surprisingly short time you can acquire a knowledge of blue prints that will be of great value to you in a salary way the rest of your life.

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INTERNATIONAL CORRESPONDENCE SCHOOLS

"The Universal University"
BOX 8171-C, SCRANTON, PA.

Without cost or obligation, please tell me how I can qualify for the position, or in the subject, before which I am marking X:

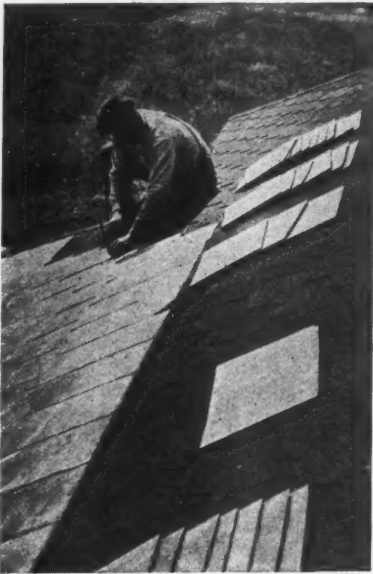
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|---|--|
| <input type="checkbox"/> Architect | <input type="checkbox"/> Navigation |
| <input type="checkbox"/> Architectural Draftsman | <input type="checkbox"/> Salesmanship |
| <input type="checkbox"/> Reading Architects' Blueprints | <input type="checkbox"/> Advertising |
| <input type="checkbox"/> Contractor and Builder | <input type="checkbox"/> Window Trimmer |
| <input type="checkbox"/> Building Foreman | <input type="checkbox"/> Show Card, Sign Painting |
| <input type="checkbox"/> Concrete Builder | <input type="checkbox"/> Business Management |
| <input type="checkbox"/> Structural Engineer | <input type="checkbox"/> Private Secretary |
| <input type="checkbox"/> Structural Draftsman | <input type="checkbox"/> Business Correspondent |
| <input type="checkbox"/> Plumber and Steam Fitter | <input type="checkbox"/> Bookkeeper |
| <input type="checkbox"/> Heating and Ventilation | <input type="checkbox"/> Stenographer and Typist |
| <input type="checkbox"/> Plumbing Inspector | <input type="checkbox"/> Higher Accounting |
| <input type="checkbox"/> Foreman Plumber | <input type="checkbox"/> Commercial Law |
| <input type="checkbox"/> Sheet Metal Worker | <input type="checkbox"/> Common School Subjects |
| <input type="checkbox"/> Civil Engineer | <input type="checkbox"/> Mathematics |
| <input type="checkbox"/> Surveying and Mapping | <input type="checkbox"/> English |
| <input type="checkbox"/> Electrical Engineer | <input type="checkbox"/> Illustrating |
| <input type="checkbox"/> Electric Lighting and Railways | <input type="checkbox"/> Railway Mail Clerk |
| <input type="checkbox"/> Electric Wiring | <input type="checkbox"/> Civil Service |
| <input type="checkbox"/> Telegraph Engineer | <input type="checkbox"/> Mining Engineer |
| <input type="checkbox"/> Telephone Work | <input type="checkbox"/> Metallurgy |
| <input type="checkbox"/> Mechanical Engineer | <input type="checkbox"/> Gas Engine Operating |
| <input type="checkbox"/> Mechanical Draftsman | <input type="checkbox"/> Textile Overseer or Supt. |
| <input type="checkbox"/> Machine Shop Practice | <input type="checkbox"/> Traffic Manager |
| <input type="checkbox"/> Stationary Engineer | <input type="checkbox"/> Automobiles |
| <input type="checkbox"/> Chemist | <input type="checkbox"/> Agriculture |
| <input type="checkbox"/> Pharmacy | <input type="checkbox"/> Poultry Raising |

- ☐ Spanish
☐ French
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Name _____
Street _____
and No. _____
City _____ State _____

Occupation _____
If you reside in Canada, please send this coupon to International Correspondence Schools Canadian, Limited, Montreal, Canada.

Re-Roofing With Natural Slate



EVERYWHERE, a common sight, is warning the public of this eventual necessity if they buy a home roofed with anything but material that is *known* to be durable. And what roofing material is better known to have withstood the test of time than Genuine Natural Slate?

Would not, therefore, the very sight of "A Slate Roofed House" invoke exceptional interest in the mind of your prospective buyer?

Literature on our special Quarry Cleft Slate as well as standard varieties will be mailed upon request, or return of this advertisement.



VENDOR SLATE CO.
INCORPORATED
EASTON, PENNSYLVANIA



\$100.00 BUYS A HESS WELDED STEEL PIPELESS FURNACE



FREIGHT PREPAID to any station East of Omaha, North of Cincinnati, West of Buffalo.

Including the register and connecting hot and cold air pipe.

Large enough for an 8 room house.

Burns any fuel—delivers all the heat.

Every seam welded—never leaks.

Sold direct from our factory to you, and fully guaranteed—, for cash or on easy payments.

Send us a sketch of your house and let us show you how to heat it economically and thoroughly. No charge, no obligation.

We make pipe and pipeless furnaces in six sizes, suitable for big or little houses.

Our 55 years of furnace experience is worth money to you. It's yours for the asking, in the form of a 48 page illustrated booklet on furnace heating. A postal card brings it to you.

SPECIAL RATES TO CONTRACTORS.

HESS WARMING & VENTILATING COMPANY
1220 South Western Avenue, Chicago, Illinois

Makers of Hess Snow-White Steel Medicine Cabinets. Distributors of Miami Wall Tile—a superior wall covering at half the price of clay tile.



Tie Up with the Garden Club Idea

IN every small city and smart suburb, there's an active garden club these days.

Rivalry among the members is keen. Many garden club members would mortgage their souls for a small garden under glass, such as this one up near Boston, to give them an edge on their rivals.

Why not make that craving your entering wedge for easier sales?

We can show you how to double the moderate investment required to build your initial greenhouse.

Frankly now, can you do any better than that with your money?

Full facts by mail if you send the coupon

Hitchings Company

General Offices and Factory:
ELIZABETH, N. J.

New York 136 Liberty St. Wilkes-Barre 402 Coal Exchange Bldg.	Philadelphia 6709 North Broad Street Boston 161 Massachusetts Ave. Albany, N. Y. 100 State Street
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(Please print plainly—Name and Address)

Send me full facts about your Sunshine Room.

Name.....

Address.....

AB-7-28



KUHLS

Elastic Glazing Composition

UNEQUALLED

You will find KUHLS' ELASTIC GLAZING COMPOSITION unequalled for bedding and glazing sash, skylights, conservatories and glass construction work, tile-setting, etc. Fine for pointing stone and terra cotta work. Ideal for window calking.

Kuhls' Composition is elastic, never sets hard, adheres strongly to wood, metal, glass, concrete, etc. Never cracks or crumbles. Stands heat and cold and is not affected by moisture or changing weather.

Kuhls' Elastic Glazing Composition can be economically and efficiently used in all construction work—from a four-room cottage to a 25-story building. It is now used by the best builders, contractors and architects and greenhouse builders in the country.

If your dealer does not carry it, write for your free sample today

H. B. FRED KUHLS
6415-21 Third Ave. Brooklyn, N. Y.



Get These Booklets and FREE SAMPLE

H. B. FRED KUHLS
6415 Third Ave., Brooklyn, N. Y.

Please send me free of charge your literature and a sample of KUHLS' Elastic Glazing Composition.

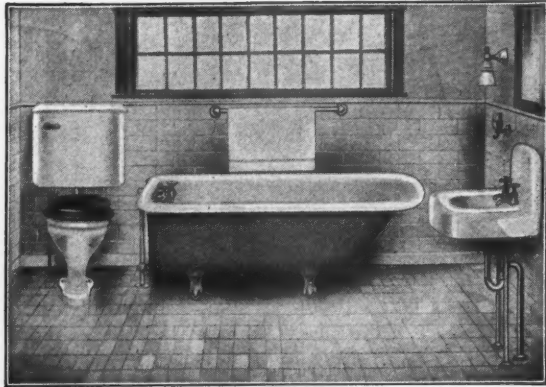
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Street.....

City.....

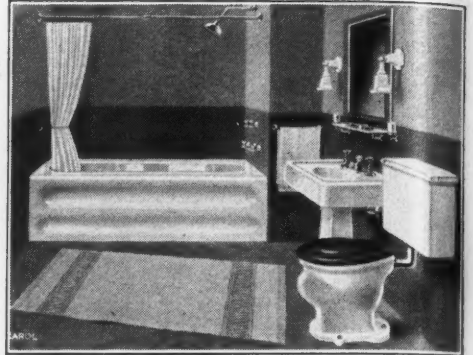
State.....

Representative Bargains from Our New Catalog



The Jewell An inexpensive high grade outfit of latest style that carries the stamp of perfection, priced very low at..... **\$55**
Bath Tub and Lavatory are cast iron, heavy porcelain and fully equipped. Tub lengths to 5 ft. same price, 26 or 30 in. wide. Closet has deep seal syphon action wash-down bowl.

on Quality
Plumbing &
Heating
Material



The Peerless Beautiful Complete **\$102**

Highest type of Bathroom. Fixtures are solid and massive. Tub, Closet and Lavatory, heavily enameled inside and out. Closet is deep seal syphon action, wash-down type with jet. Solid porcelain tank. Shower equipment shown \$11 extra.

WHOLESALE PRICES
on the best plumbing and heating supplies.
Everything **GUARANTEED**, or we refund
your money. Only high class goods sold.

Prices Always Lowest
CATALOG FREE

Hot Water Heating Plant
Complete For 6 Rooms

and bath with 900 ft. Boiler and
275 ft. Radiation of your own **\$275**
choice for only.....
Larger systems equally as low. Send your plans
for estimate—No Charge.

YOU CAN ALWAYS SAVE
MONEY AT KAROL'S

and be assured of the best quality of goods
and fast service. We carry a big stock and
can make immediate shipment. Try us!

ESTIMATES FREE

B. Karol & Sons Co., 800-10 So. Kedzie Avenue,
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There's more profit in a HUTHER SAW



Backed by fifty years experience in the making of highest grade saws, each Huther Saw has a quality built into it that insures maximum length of service.

Huther Bros. Saw Mfg. Co.
ROCHESTER, N. Y.

Makers of Better Saws for More Than Fifty Years

Keeps edges keen
and cutting clean



The

CARBORUNDUM COMBINATION STONE

REG. U.S. PAT. OFF.

HERE's a helper—always ready and willing. Carpenters and craftsmen depend on this "combination" or "double-duty" stone to keep edge tools right.

A Carborundum Combination Stone will last for years, for it is made of genuine Carborundum—the hardest, sharpest, fastest-cutting abrasive.

One side coarse grit—to start your edge and take out nicks. Other side fine grit—to give a smooth finished edge.

CARRIED BY HARDWARE DEALERS EVERYWHERE
Send for our Catalog C-2

THE CARBORUNDUM
COMPANY
Niagara Falls, N. Y.

CANADIAN
CARBORUNDUM CO., LTD.
Niagara Falls, Ont.

Carborundum is the
Registered Trade
Name used by The
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bide. This Trade
Mark is the exclusive
property of the Car-
borundum Company.



Carborundum

ABRASIVE PRODUCTS

\$95⁰⁰ complete!

for this new, speedy,
powerful electric hammer

Here's a hammer that will easily plow its way through all kinds of masonry, brick, stone, tile and concrete. It will drill, chip or channel ten times faster than by hand. Speeding at the rate of 3,600 powerful blows a minute, offered at a new low price and sold on an absolute guarantee of reliability, the new SYNTRON will prove the best investment you ever made. Get all the facts, *Now!*



SYNTRON

Portable Electric
HAMMER

Made by
SYNTRON COMPANY
PITTSBURGH, PA.

The SYNTRON Electric HAMMER is motorless, therefore has nothing to get out of order. It is the lowest priced electric hammer on the market. Send the coupon at once for full description. No obligation.

Here's the Coupon:

SYNTRON CO., Pittsburgh, Pa.

Please send me complete information at once concerning your new SYNTRON Portable Hammer at new low prices.

Name

Address

Edge Grain Flooring from SUPREME QUALITY SELECTED LONG LEAF YELLOW PINE!

As our specialty is the highest grades of flooring, the best logs are manufactured by us into flooring strips, enabling us, with the high quality of our timber, to produce a larger percentage of Edge-Grain flooring than other manufacturers of Long Leaf Yellow Pine Flooring. Scientific kiln-drying with proper moisture content and accurate machine work make the finished product the finest flooring of which men and machines are capable.

Manufactured $1\frac{3}{16} \times 2\frac{1}{2}$ " face counted as 1 x 3"
End-Matched and Plain End

"Obtainable from Your Local Lumber Dealer"



E. E. JACKSON LUMBER CO.

Sales Office: Citizens Bank Bldg., Baltimore, Md. ☉ Plant: Riderwood, Ala.



SAVES THE TIME AND COST OF TEN HANDS!

Get full particulars NOW about this wonderful time, money and labor saver. Reap the extra profit you can make on your jobs by using the "Master Woodworker".

Don't stick to old-fashioned hand methods when you can do your work so much faster, more easily and with greater accuracy. The "Master" represents the one truly practical and modern way of woodworking. Constantly increasing orders prove it and hundreds of enthusiastic testimonials establish the "Master" as the outstanding leader.

Replaces five expert carpenters' cost. Speedy, powerful, accurate, dependable. Driven by electric motor or gasoline engine. Four models. You can't afford to be without the "Master." Write today. Cash or EASY-PAYMENT PLAN.

The "MASTER WOODWORKER"

Congress and Brush Sts., Detroit, Michigan
(Established 1917)



Write for
Free Book



One POINT you ought to know

My boss would like to make one point clear to you. Here it is:

Your office is right next door to the big WILLIS factory as we have representatives in every principal city in the United States. These representatives are anxious to tell you how big our factory is here at Galesburg, Illinois. We are still growing in order to meet the exacting requirements of contractors and builders who strive to always give or specify the best.

Willie Willis

Do you know that it requires a half million tons of sheet steel a year—fed through a battery of 8 to 12 foot power forming brakes and shears—to fabricate, complete, enough hollow metal windows, fire doors, skylights, ventilators, marquee and special sheet metal work to meet the needs of this vast army of WILLIS representatives?

You can serve your clients better and save estimating time and labor by knowing, personally, the WILLIS representative in your territory. Each man is an engineering salesman capable, through training and experience, to advise you which types of sheet metal goods are best for your particular building problems. Write us for his name and address—you will enjoy knowing him and profit by it, too.

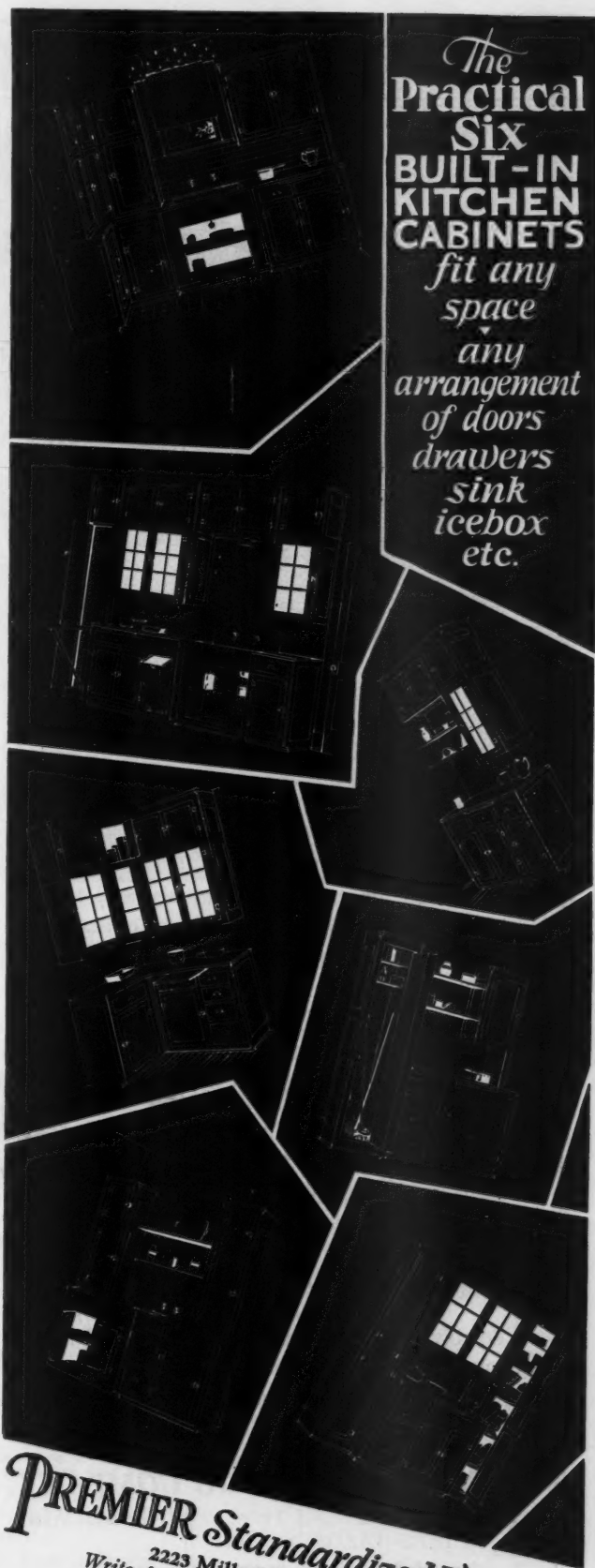
Willie Willis

FREE

Our descriptive catalog No. 8 shows a complete line of sheet metal building products. We shall be glad to send it to you FREE merely for the asking.

WILLIS MANUFACTURING CO.
Dept. 128, Galesburg, Ill.

WILLIS



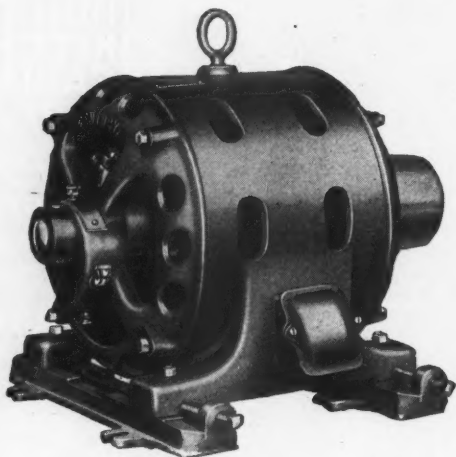
The
**Practical
Six
BUILT-IN
KITCHEN
CABINETS**
*fit any
space
any
arrangement
of doors
drawers
sink
icebox
etc.*

PREMIER Standardized Woodwork

2223 Mills Street, El Paso, Texas
Write for catalog and specification sheets on the
Practical Six Cabinets and the whole Premier line
of built-in conveniences. There is a dealer near you.



"They Keep a-Running"



5 Horse Power Century Type RS
Repulsion Start Induction Single Phase Motor

For Automatic or Remote Control Service

Wherever automatic or remote control requirements must be continuously and satisfactorily met—in installations controlled by floating or pressure switch, or where the motor is located at a distance from the operator—use Century Type RS Repulsion Start Induction Single Phase Motors.

Their starting current is so low and their acceleration to full load is so rapid that full-load operating fuses are generally of ample capacity to effect a start. . . . This eliminates the necessity of elaborate starting equipment. . . . Any approved single-throw switch can be used for starting.

Century Type RS Repulsion Start Induction Single Phase Motors are built in standard sizes from $\frac{1}{8}$ to 40 horse power.

CENTURY ELECTRIC COMPANY
1806 Pine St. St. Louis, Mo.

33 Stock Points in the United States
And More Than 50 Outside Thereof

$\frac{1}{8}$ to 40 H. P.

Century
MOTORS

$\frac{1}{8}$ to 40 H. P.

What a whale
of a lot of trouble
a little inch can make!

One Inch Slice Cut From Building

Special Dispatch to THE SUN.
SEATTLE, Washington.—One of the oddest tasks in building history here was finished recently when a one-inch slice was cut from a concrete building which had bulged over onto adjoining property. An offer to buy the inch of land under trespass was turned down, the owner desiring to sell the entire lot at a figure which the prospective purchaser thought prohibitive.

Needless to say, "Somebody blundered!" Which goes to prove that, in the long run, it is false economy to use any but the *most dependable* instruments.

K & E

CONVERTIBLE LEVELS

usually are found on jobs where *accuracy* and *speed* mean dollars to the contractor.



Catalog sent on request

KEUFFEL & ESSER CO.

New York, 127 Fulton St. General Office & Factories, Hoboken, N. J.

CHICAGO

ST. LOUIS

SAN FRANCISCO

MONTREAL

SAMSON SPOT SASH CORD

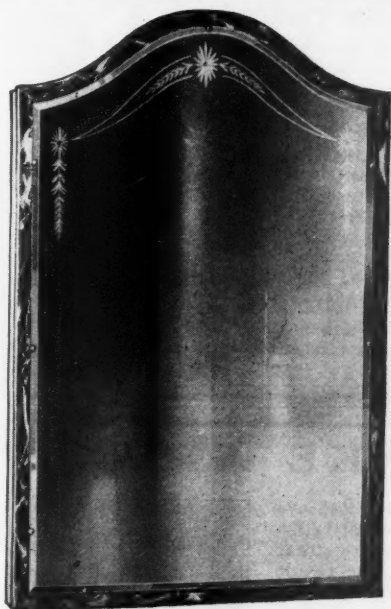
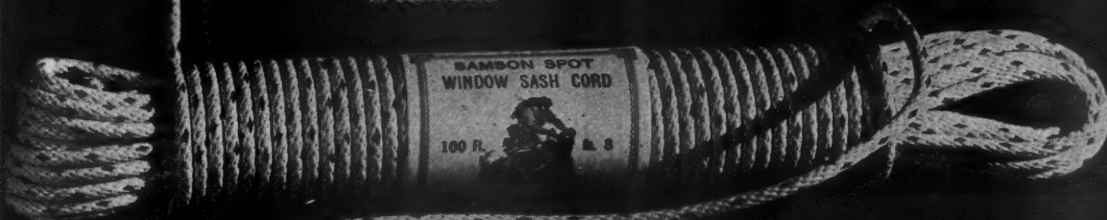
SOLID BRAIDED COTTON

SAMSON SPOT SASH CORD is made of extra quality cotton yarn spun in our own mills and is guaranteed to be free from imperfections of braid or

finish. It is the most durable material for hanging windows. It can be easily distinguished by our trade-mark, the Colored Spots. Send for samples.

SAMSON CORDAGE WORKS - BOSTON, MASS.

*"There is a Difference
in Sash Cord"*



Five Models to Choose from:
De Luxe Victorian Renaissance
Colonial Roman

Write today for full details about the entire list of 1928 models. Catalog No. 7 on request.

THE MIAMI CABINET CO.
MIDDLETOWN, OHIO

The Cabinets Builders have been waiting for! **NEW MIAMI CABINETS**

OUTSTANDING in design, attractiveness and construction. Ultra modern fixtures that mark the conveniently built home, apartment or hotel. Easily installed . . . and the prices are reasonable. Five designs to show. Illustrated is

"The Renaissance"

So cleverly arranged that when the cabinet is closed it gives the appearance of a mirror set flush with the wall. The

door front is black and gold marble finished steel. The 18x28" Venetian Mirror is artistically etched in silver and gold.

Breakage, heretofore a "bugbear" in shipping and installation, is held to a minimum with three carefully tested Miami features:

- 1 Mirror is held by ornamental clips . . . no holes to lessen strength of glass,
- 2 Air-cushioned door absorbs shocks of slamming,
- 3 Full length piano hinge.

MIAMI LAUNDRY QUEEN IRONING BOARD CABINET

Everything neat . . . everything compact. Saves space and adds to kitchen convenience.

THE MIAMI CABINET CO., Middletown, Ohio.
Please send me full particulars about MIAMI CABINETS.

Name.....
Address.....
City..... ☐ Owner ☐ Contractor
☐ Architect ☐ Dealer



For Shore Cottages and Summer Homes

Here the Bessler is especially appreciated for it provides easy access to the floor or loft above, and gives the fullest use of the floor below. It is easily installed and the cost is low.

Send for new circular showing particular application to summer homes.

The Bessler Disappearing Stairway Co.
AKRON OHIO



"I wouldn't use anything but SISALKRAFT"

"THERE'S no waste to Sisalkraft," says one Illinois contractor. "In the first place I can use every piece for it doesn't get torn in handling. Then I use most of it twice—once for protecting floors and finished work and then in the walls or floors in the next job."

This double use of Sisalkraft cuts down the cost and speeds up the work anywhere that a building paper would be used. Sisalkraft with its combination of tough strength and complete waterproofing means a better job, better protection to the finished building. Send for samples of this new material or get a roll from your dealer and try it on your next job. You will find a dozen different uses for Sisalkraft and a decided saving in all the ordinary building paper applications. Try Sisalkraft once and you will use it exclusively.

The Sisalkraft Co.

228 N. La Salle St. Chicago, Illinois

SISALKRAFT

"MORE THAN A BUILDING PAPER"

AB7-Gray

Your Own Business — Steady Income All Year!

BE independent of dull seasons, strikes and bad times. There is money in the saw-filing business . . . when you do the work automatically, with machine precision, and twice as fast as hand-filing . . . on the wonder-working

Foley Automatic Saw Filer

It files and joints (in one operation) all kinds of hand saws, band saws $\frac{1}{8}$ to $4\frac{1}{2}$ inches wide, and cross-cut circular saws 3 inches to 24 inches in diameter. No eyestrain—easy to run. Makes saws cut faster, cleaner, truer, and stay sharp longer. There's a big market among factories, schools, meat markets, farmers, carpenters and homes for this new standard of accurate saw-filing. Hundreds have proved it. For instance, Nels Emstad, Albert Lea, Minn., who writes:

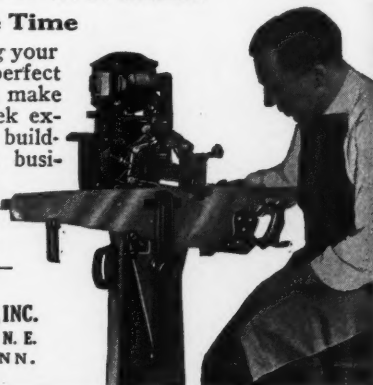
"The filing business is good. I get all the work I can do. . . . The Foley Filer is an absolutely true machine and cannot be excelled."

Start in Spare Time

Besides keeping your own saws in perfect cutting condition, make \$15 to \$20 a week extra income while building a permanent business. No canvassing — we'll give you a FREE Plan and help you get started. Address—

FOLEY SAW TOOL CO., INC.

131 Foley Bldg., 9 Main St. N. E.
MINNEAPOLIS, MINN.



THESE WINDOWS WILL MAKE A PROFIT!



Residence Casement

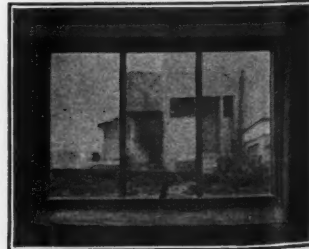
DEALERS are making money in handling Bayley-Springfield Steel Windows. Designed for all types of buildings. Bayley construction features make for great strength and economical installation, and are the result of 45 years' experience in architectural ironwork. Carried in stock so that a dealer's turnover makes the Bayley line an attractive proposition.

THE WM. BAYLEY COMPANY

128 West North Street SPRINGFIELD, OHIO

Sales Offices and Warehouses in Principal Cities

Bayley-Springfield Steel Windows



Windows for Basements

The Bayley Window for basements in residences, apartments and other buildings. Fine for side walls in garages and small buildings. Cost no more than wood, yet give 50 per cent more light—made in four standard sizes.

All Angles Are Cut Accurately with the Portable Crowe Safety Beveling Saw



Cut bevels the natural way. Take the Crowe Safety Saw to the job, plug into a light socket, and the saw is ready to cut at any angle you wish. For speed, portability, ease of operation, lasting service, it stands without a rival.

Body of aluminum alloy, blades are standard and can be purchased any place, equipped with proper gearing, it will not heat and is absolutely fool-proof.

With amazing speed you can make window frames, cut or trim flooring, cut frames, joists, studding, sills, cut jack rafters, rout for stair risers—any cut out of the ordinary.

You can't get hurt with a Crowe—automatic safety guard locks in position when not in use. Approved for safety by industrial commissions, listed as standard by Underwriters' Laboratories, and recommended by insurance companies.

A positive time and hard work saver wherever lumber is cut on the job. Made in four sizes: CC-7, CC-9, CC-12 and CC-16, cutting 2", 2½", 4½", and 6½", respectively.

Write for folder and information, and learn about the many Crowe Safety Saw advantages.

THE CROWE MANUFACTURING CORP.
317-321 Sycamore St., Dept. A, Cincinnati, Ohio

"CROWE SAFETY SAW"
CUTS THE COST

REDYBORD

INDISPENSABLE TO HOTELS—APARTMENTS—HOMES

This Marvelous Invention is such a convenience to guests and such a saver of money to proprietors of furnished rental properties that they should not be without it.

The REDYBORD puts an end to the marring of furniture and cost of refinishing which amounts to thousands of dollars.

The REDYBORD needs no installation. It can be attached to a closet door, bathroom door or on the springs of an In-A-Door Bed. The low cost combined with the utility of REDYBORD make it a ready seller.

DISTRIBUTORS

There is a large field in Hotels, Apartments and Pullman Kitchenettes for energetic and reliable contractors who wish to specialize. There is some exclusive territory still open to the right men.

Send for information at once



REDYBORD, INC.

General Offices and Display Rooms
Builders' Building

Factory
28 So. Wells St., Chicago

REDYBORD, Inc.,

Builders' Building Chicago, Ill.

Please send complete information regarding REDYBORD.

Please check the square, so we may know your requirements.

I am interested in proposition as distributor ☐.

Name.....

Address.....

Contractor ☐

Dealer ☐

Architect ☐

(?).....

WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER



Steel and Woven Tapes
of all patterns. Folding
Aluminum and
Steel Rules.

LUFKIN

MEASURING TAPES AND RULES



Send for Catalog



Spring Joint Rules with
or without hook; Box-
wood, Caliper, and Ex-
tension Rules.

New York
Windsor, Ont.

THE LUFKIN RULE CO.

Saginaw,
Mich.

HERE is the logical power unit for Contractors and Builders Equipment



Fullpower
4-CYCLE AIR-COOLED
GASOLINE ENGINES

4 sizes:
1/2 H.P., 3/4 H.P., 1 H.P.,
1 1/2 H.P., ranging in
weight from 57 1/2 lbs to
98 lbs.

Ten years of dependable service as standard equipment on contractors' and builders' equipment—that's the record behind FULLPOWER engines. Men in the contracting and building field have seen these powerful, compact, small size engines perform faithfully week after week under full load. They know what the FULLPOWER engine will do. When you equip the machines you build with a FULLPOWER, you get the benefit of this reputation—it's a big selling factor.

Outline your power application problem to our Special Engineering Department—our experience will help you work out a satisfactory solution.

BRIGGS & STRATTON CORPORATION
Dept. A2 MILWAUKEE, WIS.

Added \$2700 to Income Making Porch and Garden Furniture



H. G. Young of New Jersey Increased His Income \$2700 Manufacturing This Beautiful Porch and Garden Furniture.



CAIRO
Materials cost 14c
Selling price \$3.00



SPANISH JAR
Materials cost 60c
Selling price \$7.50

His investment in our UTILITY molds was \$97. He purchased the sand and cement locally and during spare time made beautiful urns, flower boxes, etc., which he sold at a profit of 200%.

There's a big waiting market everywhere for porch, garden and lawn furniture made in permanent concrete. Easy to make—we furnish complete instructions. Learn how others are making big money and building up a prosperous business of their own. Send for UTILITY book today which tells all. Also ask for machinery catalog of block, brick, and tile.

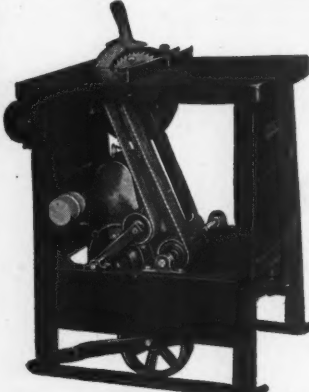
CONCRETE EQUIPMENT COMPANY
500 Ottawa Avenue, Holland, Mich.



MADEIRA
Materials cost 24c
Selling price \$4.00



LOTUS
Materials cost 90c
Selling price \$6.00



One man moves it (wheels provided).

WHY SAW LUMBER BY HAND?

**When You Can Take A Power Saw Out On Every Job
The Saving You Make With Its Use Is A Real Profit**

Here is a Powerful, Portable, Carpenter, Sawing Machine not dependent on electric service or skill of the operator. Will cut rafters, studs, stairhorses and bridging; square long dimensions as fast as you can handle the lumber. For trimming sash, doors, screens, fitting casing and flooring. Will do those smooth, accurate jobs with 50% of the cost of hand fitting.

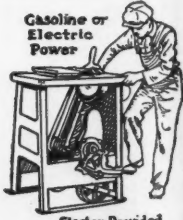
Cross Cuts, Rips, Miters, Dados

Furnished with either gasoline or electric power, or both. Gasoline equipment weighs 300 pounds and is positively without vibration. Runs all day long on a couple of gallons of gas and a little oil. Will saw as much lumber as a crew with hand saws. Build 1928 buildings 1928 way.

If you will write, we will make you a trial offer that will interest you. Delivery from stock or warehouse near you.


Manufactured by
D. W. ONAN & SONS, Minneapolis, Minn.

4448 Royalston Ave.,

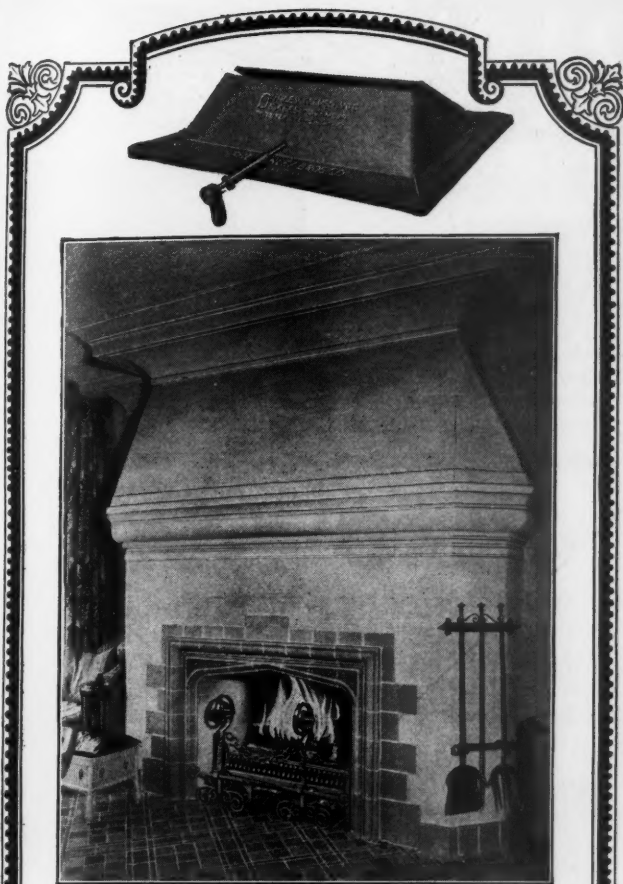


Gasoline or
Electric
Power

Starter Provided



Two men load it.



Fireplaces That Give Plenty of Heat!

IN modern homes, fireplaces are used only as supplements to the home heating plant and for providing heat on cool fall and spring evenings.

Fireplaces built according to Donley Construction Plans and containing the Donley Damper, can be guaranteed to give plenty of heat for the above uses, and to be free from soot and smoke evils.

Any mechanical device, other than a damper and ash dump, are entirely unnecessary, do not add to fireplace efficiency, but do add tremendously to fireplace costs.

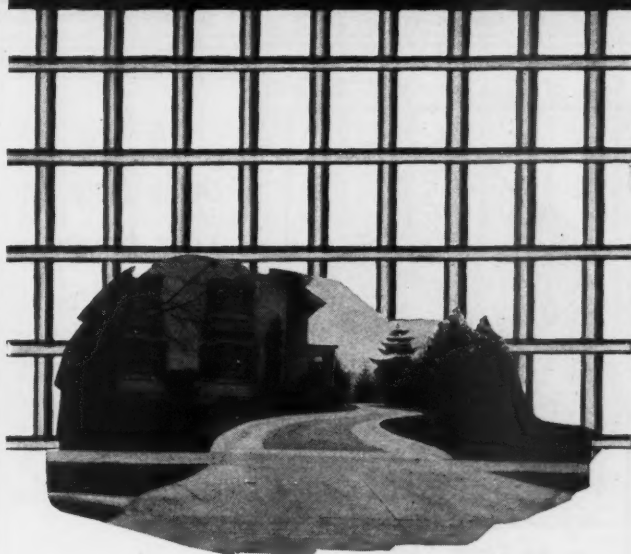
Send 25c in stamps or coins for a copy of the Donley Book of Successful Fireplaces that gives construction plans, fireplace designs and descriptions of Donley equipment for building completely successful fireplaces at lowest possible cost.

The Donley Brothers Co.
13910 Miles Avenue • • Cleveland, Ohio



American Steel & Wire Company's REINFORCING for Driveways and Sidewalks

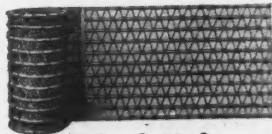
"The Steel Backbone for Concrete"



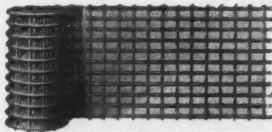
Longer Life ~ Better Appearance

For the same good reasons that you reinforce concrete roads and street pavement, you also want steel reinforcement in the driveways and sidewalks you build. Lengthen the life of the concrete, reduce repair expense and protect the beauty of a clear surface free from cracks and patches.

Good-looking jobs are your best advertisements.



Triangle Mesh



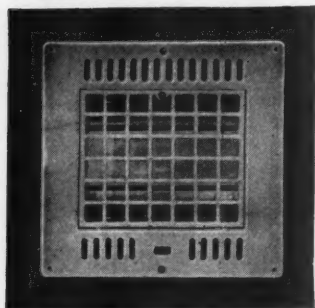
Electric Weld

Experienced contractors are specifying and using American Steel & Wire Company reinforcing fabric—Triangle Mesh or Electric Weld. Made of cold drawn, high tensile strength steel—the kind that can be depended upon for concentrated binding strength over the longest period of time. Supplied in rolls or sheets for any kind or size job. Write us for complete information.

American Steel and Wire Company

SALES OFFICES

Chicago, New York, Boston, Atlanta, Birmingham, Cleveland, Worcester, Philadelphia, Pittsburgh, Buffalo, Detroit, Cincinnati, Baltimore, Wilkes-Barre, St. Louis, Kansas City, Minneapolis-St. Paul, Oklahoma City, Memphis, Dallas, Denver, Salt Lake City.
*San Francisco *Los Angeles *Portland *Seattle
*United States Steel Products Co.



Radia Wall Type Heaters
A permanent installation that adds greatly to home comfort and convenience. For bath or dressing room. Globar element unharmed by water. Wall opening, 14" x 14" x 3 1/2". List price, \$25.00.

RADIA

Gas and Electric HEATERS

Prospective Home Owners Appreciate Their Many Advantages!

Quick odorless heat in the bath or bed room (instantly available in chilly weather), or a realistic log fireplace—for utility or ornamentation RADIA heaters meet the need! And because they have these factors of convenience and comfort as well as beauty and appeal, they strike the fancy of prospective home owners. Builders find them a great help in profitable turn-over of property!

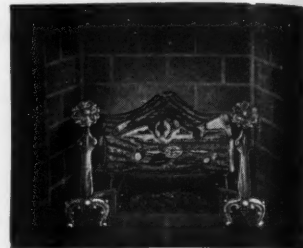
We manufacture a complete line of Gas and Electric heaters for the home.

F. W. SHEPLER STOVE COMPANY
1300 Sheffield St., Pittsburgh, Pa.

Radia Fireplace Log

A beautiful ornamental living-room fireplace strikingly realistic reproduction of log fire. As ornament or as a heater this unit with its Globar heating element will appeal. Three widths, 18", 22" and 25".

List, \$25.00—\$45.00.



The Money Making Possibilities

—and—
WRIGHT RUBBER TILE
In Your Town

—and—
Directions For Laying



WRIGHT RUBBER PRODUCTS CO., Dept. A, B 7, RACINE, WIS.

A New Department In Your Business

Contractors, builders and floor layers all over the country have found Wright Rubber Tile an excellent source of increased income for them.

Opportunity Outlined

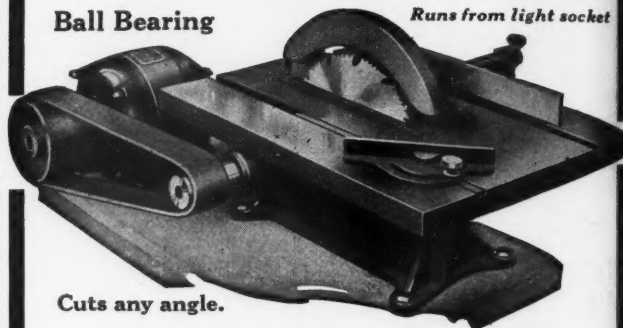
The ease of laying and the outstanding advantages of this modern flooring are outlined in our book, illustrated at the left. A postcard in the mail today will bring you a Free copy. Write.

Safety - Saw

RIP-CROSS CUTS-MITERS-JOINTS
GROOVES-RABBETS-TENONS-BORES
MORTISES-DADOES-BEVELS-SANDS

Ball Bearing

Runs from light socket



Cuts any angle.

Table tilts to 45° and raises for any depth of cut or Dado

Handles 2 1/2" Material with 8" Saw

Do your work on this machine and save many hours hard labor. The Safety Saw will handle 80% of your inside trim, closets, shelving, cabinets, etc., and will pay for itself on the first job.

WITHOUT MOTOR \$35.00
WITH 1/2 H.P. MOTOR \$67.00

Metal Table
14" x 17"

\$48⁵⁰

Including, 1 H. P.-A. C. Motor, Belt, Pulley, 8 in. Saw, 2 Guides, Aluminum Guard.

Free Trial

Write for Folder SAB-7

SAFE TOOL MFG. CO., Bridgeport, Pa.

Weatherstrip and Screen Men ... A Valuable Franchise

This is a special offer to a few men who know the weatherstrip and screen business. It gives you opportunity to own your own business and still cash in on the Ceco nationally advertised name. Ceco ads are read by over one million people per month. Ceco Weatherstrips are known everywhere.

Now Ceco introduces its new metal frame window screen. That assures you year round business. You obtain exclusive territory. Strips reach you straight and true. Shipments within 24 hours. These are the reasons present Ceco agents make \$5,000 to \$10,000 per year. Only live dealers are wanted. Write for full details.



METAL WEATHERSTRIPS AND WINDOW SCREENS

Ceco Weatherstrip & Screen Co.

1926 So. 52nd Ave.
CHICAGO, ILL.

FOR casement security, convenience, ease of operation, safety, and protection, use Win-Dor Casement Operators on your jobs.

Win-Dor

CASEMENT HARDWARE

The Casement Hardware Co.

402-A North Wood Street, Chicago

CASEMENT HARDWARE HEADQUARTERS

One Piece Dependability

Expanded from one piece of steel without welds or rivets under stress, the Bates-Truss Joists give one-piece dependability to construction. Uniform in strength, the open web permits piping and conduits to be run without trouble. Every contractor and architect should have a copy of the Bates catalog on file, giving complete specifications, load-bearing table, etc.

Write for a copy today.

BEST
Bates Expanded Steel Truss Co.
EAST CHICAGO, IND.



You Buy the BEST When You BUY—

Miles
CONCRETE EQUIPMENT

Manufacture Concrete Blocks for any type building. Thousands of satisfied users for over 30 years have proven and recommended the qualities of Miles Concrete Equipment. Our policy of always building the best machines at the lowest practical cost has made our volume production possible. You get the benefit of still lower prices.

You can pay more but you can not buy better. Miles Concrete Equipment is quality equipment built for service and fully guaranteed. Big opportunities for the man who manufactures Concrete Blocks. More fireproof buildings being built every year. The time has come when people are building for permanence and beauty. Get into this field NOW.

Write at once for complete information and our catalog.

The MILES MFG. CO.
Dept. 9
JACKSON, MICH.

Complete Miles unit—Block Machine, Power Tamper and Elevator Feeder.

Miles Manufacturing Co.,
Jackson, Mich.

Send me complete information and your catalog.

Name

Address

Town, State.....

BETTER SIDEWALLS



AT LOWER COST

WHETHER for remodeling or new work, consider WEATHERBEST Stained Shingles. No other sidewall material will

give their beauty of appearance, their saving of labor and time, their saving of paint and repair.

The WEATHERBEST process of hand-dipping 100% edge grain red cedar shingles, cut from first growth timber of inexhaustible supply, assures you best values. Each shingle is evenly stained. At time of repacking, any imperfect shingles are thrown out and replaced by good ones. There is sixteen years' experience behind this policy: *Not to cheapen materials or process to meet price competition.*

For 10c (stamps or coin) we will send WEATHERBEST Color Chart and Portfolio of Photogravures in color showing WEATHERBEST homes as they actually appear. Let us also send a book telling you how to remodel old homes with WEATHERBEST Stained Shingles laid right over old sidewalls.

Weatherbest
STAINED SHINGLES
FOR ROOFS AND SIDE-WALLS

WEATHERBEST STAINED SHINGLE Co., Inc.,
140 Main St., North Tonawanda, N. Y.

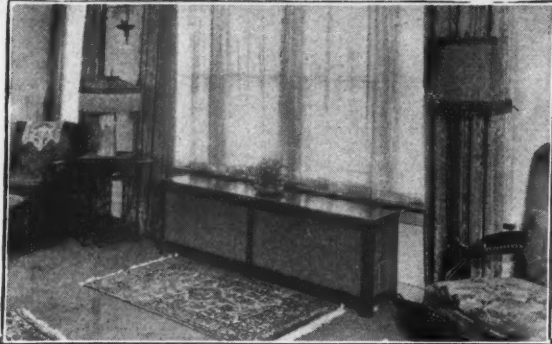
Enclosed is 10c (stamps or coin). Please send WEATHERBEST Color Chart and Portfolio of Photogravures showing WEATHERBEST homes in color. ☐ Also send Book on Modernizing and Reshingling over old roofs and sidewalls, with details explaining your Remodeling Service.

Name

Address

TRICO Radiator Furniture

This Trico installation, with an explanatory article on its scientific construction, was displayed on Page 200 of the April issue, *American Builder*. Refer to it for complete details.



A Sales Argument in Every Room

Your prospects respond at once to Trico Radiator Furniture. They know it reduces cleaning bills, protects walls and drapes, and beautifies rooms. It provides the humidified air they want for themselves and children. They also know Trico as the most widely advertised radiator furniture. Sell or rent your buildings easier with Trico equipment.

Write for Contractors' & Builders' Franchise Plan. Also Trico Book of Interior Decorating, and estimate forms. Write personally to Norman V. Ventris, General Sales Manager.

TRICO, Inc. Subsidiary to Art Metal Radiator Cover Co.
1718 N. Kolmar Ave., Chicago, U. S. A.

THE Fire That Heats the Home Heats a Plentiful Supply of HOT WATER

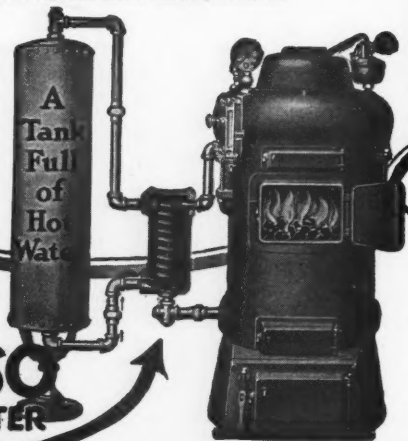
when the Excelso is connected to the steam or vapor heating boiler. It eliminates leaky fire pot coils; requires no attention.

In all sizes to supply hot water for one family or one hundred families.

Excelso Products Corporation
DIVISION OF AMERICAN RADIATOR COMPANY
79 Clyde Ave. Buffalo, N. Y.

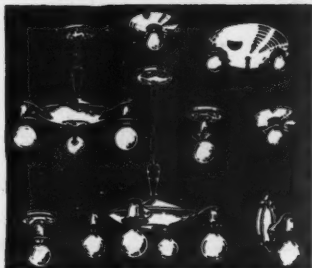
Nationally Distributed by Leading Wholesalers
and Boiler and Radiator Manufacturers

Sold and
installed by
plumbing
and heating
contractors
everywhere.



EXCELSO
WATER HEATER

quality lighting fixtures



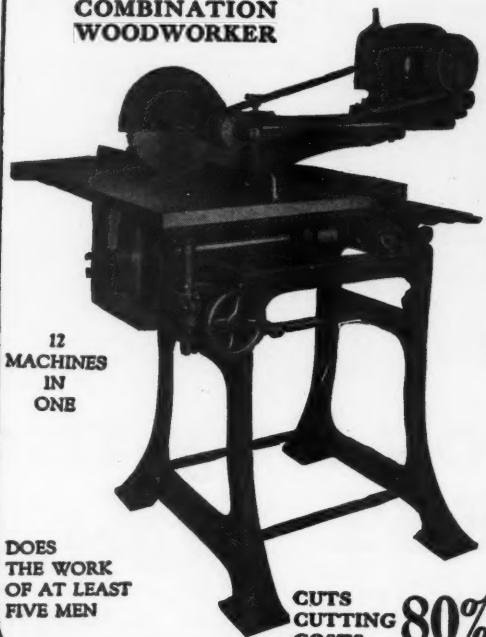
Complete Outfit for 5-Room House \$10

Living Room, Dining Room, Bed Room, Porches, Kitchen and Bathroom; all fixtures completely wired and assembled; we furnish tape, wood screws, fasteners and solderless connection. Every fixture guaranteed and tested. Artistic design; beautifully finished. Direct sale to you from factory makes this low price possible. We save you $\frac{1}{4}$ to $\frac{1}{2}$ on lighting fixtures.

Write for complete catalog.
BAB'S LIGHTING FIXTURE MFG. CO.
4204 Hastings Street Detroit, Michigan

BEAVER

COMBINATION
WOODWORKER



12
MACHINES
IN
ONE

DOES
THE WORK
OF AT LEAST
FIVE MEN

CUTS
CUTTING COSTS 80%

Write for Free Folder B.A.B-7

HUTCHINSON MFG. CO., INC.
MAIN OFFICE AND FACTORY, NORRISTOWN, PA.



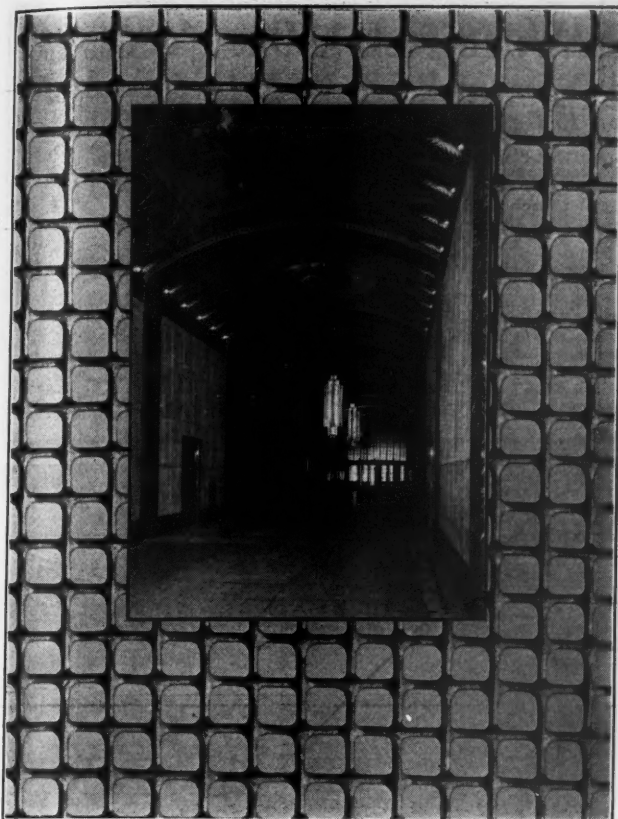
AJAX folding
metal
SHEATHING
AND ROOFING
BRACKETS

Protect the roof as well
as the workers. The quick-
est ever; safe as the earth
under your feet.

Send for descriptive literature to

Ajax Building Bracket Co.
1551 Rydal-Mount Rd. Cleveland Heights, Ohio





When finish costs Real Money

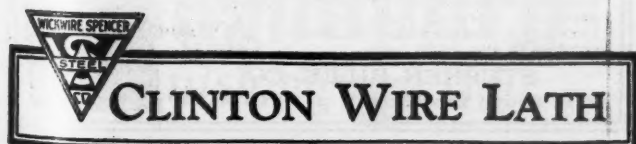
YOU want Clinton Wire Lath under the plaster.

For then you know that the plaster is permanent. The drawn steel wires woven and galvanized together are as strong . . . yes, stronger than sheet metal. And a perfect key is provided both horizontally and vertically.

These are days of high land values when apartments are leased from plans, offices rented before old buildings are demolished and occupancy planned to the day. Decorating must be done when the building is finished. There is no time to wait for the building to get through cracking.

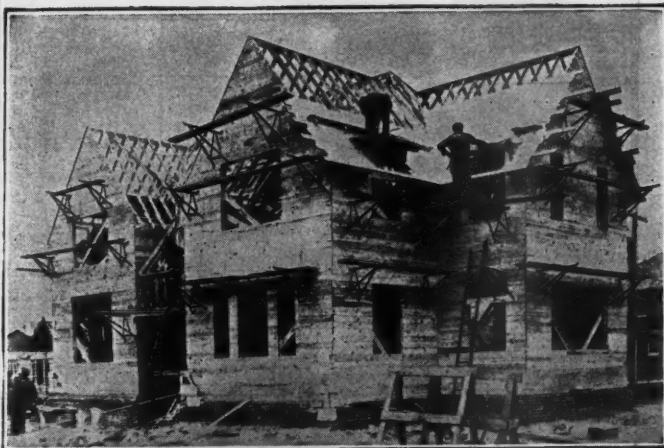
With Clinton Wire Lath cracking is reduced to a minimum. It's the lath to use when the finish costs real money.

WICKWIRE SPENCER STEEL CO.
49 East 42nd Street, New York, N. Y.
208 South La Salle Street, Chicago, Ill.



WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

Everlasting Money Makers



Trouble Saver Steel Brackets

No Surer Money Maker on the Market

Literally cost you nothing—because they save their cost on their first job.

And they go on, year after year, saving their cost on every new job. Nothing to wear out or give way. Everlasting money makers!



Trouble Saver Studing Brackets Support a ton. Will not bend. Hook around studding. Braced by two legs. Fold compactly for cartage or storage.



Trouble Saver Nail Attached Brackets Support a ton. Held by four nails and braced by two legs. Fold compactly for cartage or storage.



Trouble Saver Bolt Brackets Approved by State Industrial Commissions. Detachable rail standards. Held by 1/2" bolts. Fold for cartage or storage.



Trouble Saver Adjustable Steel Trestles (Patented). Quickly adjusted to desired heights, 8 sizes. Each size adjustable from 4 to 15 different heights, giving a range from 16 inches to 12 feet by 3 inch lifts. Save countless sets of wooden horses.

Trouble Saver Steel Products

Studding Brackets
Nail Attached Brackets
Bolt Brackets with Safety Railing
Adjustable Trestles
Ladder Jacks
Wood Shinglers
Asphalt Shinglers
Mortar Board Stands
Sectional Steel Scaffolding

THE STEEL SCAFFOLDING CO.

1101 Governor St., Evansville, Ind.

Money Back Trial Offer

Please send us details on your 30-day free trial offer and full information and prices on Trouble Savers.

Name.....
Address.....
City..... State.....

1101

The only machine that you can tilt the table to 45° without removing insert. Big advantage on pattern work.

S & B-8" COMBINATION SAW: 18 Tools In One

GREATEST MACHINE YOU EVER SAW! 12" Band Saw

Money Back Guarantee

Sent to You on 15 Days' Approval



Price Includes
1/8 H. P.
A. C.
Motor

\$35
F. O. B.
CHICAGO

Write for Complete Illustrated Folder—Dealers Wanted.

{ 1/8 H. P. Motor—40°—100% overload Double Shaft Extension }

THE S & B 8-in. COMBINATION SAW (18 tools in one) is the ideal machine for the shop, factory or the home; will rip, cross cut, bevel, miter, mortise, groove, drill, tenon, grind, rabbet, buff and polish. Motor is mounted on a base that is a part of the machine proper. Run from any light socket, also provides for other purposes when the saw is not in use. Complete with attachments and price includes 1/8 H. P. Motor, 60-cycle, 110-Volt A. C. Price \$35.00 F. O. B. Chicago. Shipping weight 100 lbs.

(Planer attachment to fit on table top will smooth pieces up to 2 inches wide, \$10 extra.)

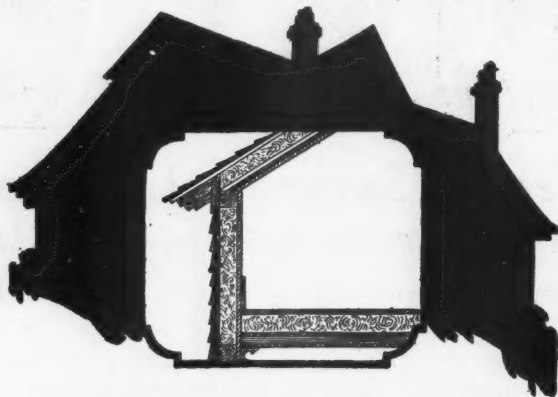
12" Band Saw

Positively a sensation and at this LOW PRICE you can NOW do the 1001 things you wanted quickly and easily. This 12" BAND SAW has a tilting table with Miter and sturdy built. Ideal for the shop or home. Motor \$12 extra.



SCOTT-BANSBACH MACHINERY CO.
130 So. Clinton St., Dept. 81 CHICAGO, ILL.

\$35.00 F. O. B. Chicago without Motor



The Best Protection for Any Building

MINERAL WOOL

THE PERFECT INSULATOR

Every speculative builder should investigate the increased value Mineral Wool adds to a building—every individual home builder should demand its use.

Mineral Wool is a sanitary, entirely mineral material indestructible, thoroughly fire-proof, vermin-proof, and sound-proof—and easy to apply.

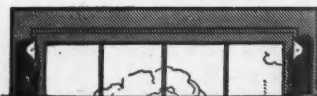
Mineral Wool keeps out both Summer heat and Winter cold, and reduces the hazard of fire.

The saving it effects in Winter fuel alone will pay for the cost of installation within a few years.

Sample and illustrated booklet will be forwarded upon request.

U. S. MINERAL WOOL COMPANY
280 MADISON AVENUE NEW YORK, N. Y.

Western Connection: Columbia Mineral Wool Co., South Milwaukee, Wisconsin



—For permanence specify the famous

Hodell Sash Chain



Hodell No. 75 Apartment Sash Chain offers the most modest home or apartment building all the advantages of noiseless, permanent, smooth-running sash chain at no greater cost than for cord. Formed from a cold-drawn ribbon of polished steel, NOT STAMPED FROM SHEET: every link is uniform. See Sweet's. Ask for A. I. A. Specification File, Class 27-A1, and No. 75 folder.

We have some open territory on an exclusive basis for reliable resident agents handling several builders specialties.

THE CHAIN PRODUCTS CO.
Established 1886
CLEVELAND, OHIO

\$75.00

The
PAUL
COMMANDER
DIRECT SERVICE WATER SYSTEM

Big Capacity Low Price! Automatic!

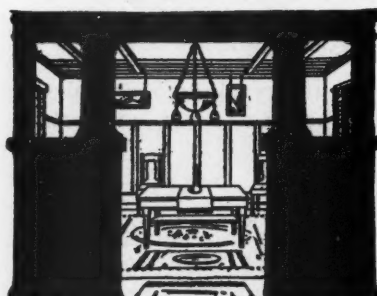
THIS compact little outfit has a capacity of 215 gallons per hour, the highest of any pump of its type at anywhere near the price, quality being equal. Has the new Paul Non-pulsating device

[patent applied for] which is especially designed to eliminate entirely the pulsating action of the system, insuring quiet operation. It is fully automatic and whenever a faucet anywhere in the house is opened the pump starts and delivers water under pressure direct from the source. When the faucet is closed the pump stops—no attention—no bother. It will pump from cistern, shallow well, lake, spring or stream,—wherever water supply is not more than 22 feet below pump. Here's the ideal water system for the small suburban and country home, and it lists for just \$75.00.

Write for Bulletin and full details.

FORT WAYNE ENGINEERING & MFG. COMPANY

1713 N. Harrison St., FORT WAYNE, IND.



BUILT-IN WOODWORK

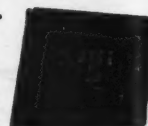
Adds the touch of Refinement. Beauty that increases renting and selling values.

SEE OUR OFFERS

Bookcase Colonnades—Sideboards, Medicine Cabinets, etc., are of Distinctive Design and give living comfort to any home.

Send for Free Catalog

STEPHEN BILEK CO.
2119 South Troy Street : CHICAGO



PLASTERING IS 90% OF
THE VISIBLE INTERIOR

PLASTER

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LIME



Investment builders appreciate the powerful selling influence of beautiful lime-plastered walls and ceilings to greet the scrutiny of the prospective home purchaser . . . Permanence, lasting satisfaction, evidence of quality building—all for 10% of the total cost . . . Specify Gibsonburg, Ohio's Super-Finish—from America's finest lime processing plant. Uniformly fine.

Plaster is a word too often used in a broad sense. There are many kinds of plaster. Specify LIME plaster for this important building item.

Gibsonburg

Finishing  Lime

THE GIBSONBURG LIME PRODUCTS CO., Gibsonburg, Ohio



Jaeger One
Bag Tilter...

at the usual
half bag price

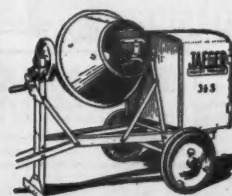
5 Second Discharge with Faster Skip Shaker Loader—MORE Profit

THE time saving features of this one bag Jaeger Tilter are money making features for you—Automatic Skip Shaker, pat'd "Flat Spot" remixing drum, semi-automatic discharge, Accurate Measure Water Tank and many others.

It's Jaeger-built to last with steel construction (50% stronger) and 100% Timken roller bearing throughout, and you can buy it for the usual half-bag price.



SKIP
SHAKER
Auto-
matic!
No Need
to
Pound
the
Loader!



\$179.50 NET, F. O. B.
COLUMBUS

buys this half
bag trailer
Complete!

Date.....
THE JAEGER MACHINE CO.
521 Dublin Ave., Columbus, Ohio
Please send catalog, prices and terms on:
☐ Non-Tilt Mixers ☐ Plaster Mixer
☐ Tilting Mixers

Name.....

Address.....

City..... State.....



HEAVY DUTY
Non-Tilters
7 to 28 Ft.
Sizes

THE FARRAND RAPID RULE

A
Modern Tool
for Modern
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Six feet of
Accuracy in
a Neat, Vest-
Pocket Cup

RIGID

and

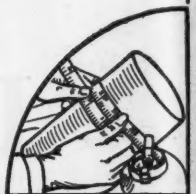
FLEXIBLE

Like a wooden rule, The Farrand Rapid Rule measures flat surfaces, from a few inches to six feet. Instantly available, released by slight pressure on brakes.

Like a steel tape, The Farrand Rapid Rule measures circumferences. Because of its slight concavity and nicked surface its markings can be read in dim corners.

Rules Now Made in the Following Scales
72 inches with 1/16 inch graduations
2 meters with millimeter graduations
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Price \$5. Ask Your Dealer or Write H. A. Farrand, Mfr., Room 639A, 149 Broadway, New York City



MYERS SELF-OILING POWER PUMPS for OPEN or PRESSURE TANK SERVICE

Start at the beginning—go down through the entire list of styles and sizes—where power water facilities up to ten thousand gallons per hour are desired there is a Myers Self-Oiling Power Pump for the purpose.

Belt or chain drive, with or without motor as pictured, for shallow or deep service, meet depth, volume and motive requirements. If you are interested in running water for factory, home or farm, write us for information and catalog.



Take Off Your Hat
To The
MYERS
PUMPS - WATER SYSTEMS - HAY TOOLS - DOOR HANGERS

THE F. E. MYERS & BRO. CO.
ASHLAND, OHIO.
ASHLAND PUMP AND HAY TOOL WORKS

Adamston Vertically Drawn Flat Glass

AMPLE capacity to promptly fill the most exacting specifications.



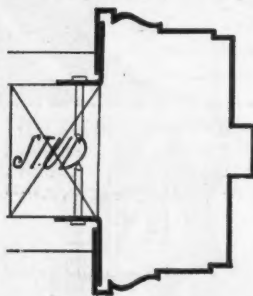
A brand you



can depend upon.

ADAMSTON FLAT GLASS COMPANY
CLARKSBURG, W. VA.

ROLLED STEEL DOOR FRAMES WILL INCREASE YOUR PROFITS



Showing buck applied to wood stud

The combination buck jamb and trim eliminates separate wood or steel bucks jambs and trim and thereby reduces erection cost two-thirds as the entire unit is installed at one time. Cold rolled of 16 gauge steel—it withstands and absorbs the shock of the heaviest door.

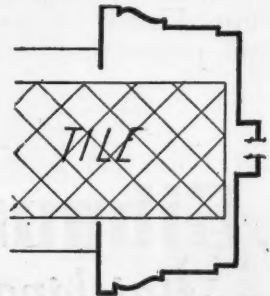
Units made for single or double doors, transom openings, etc. Jambs reinforced securely and drilled and tapped for application of hardware.

Furnished in prime coat ready for finish painting. Prompt shipment, low in cost and easy to install.

LEONARD SHEET METAL WORKS, HOBOKEN, N. J.

Established 1900

Also Manufacturers of Steel Windows, Kalamein Work and Bronze Doors.



Showing buck applied to hollow tile partition



Vitrified clay
sewer pipe has
no upkeep be-
cause it stays
down

CLAY PRODUCTS ASSOCIATION
CONWAY BUILDING
Chicago

VITRIFIED *Salt Glazed* CLAY
Sanitary Sewer Pipe

AB 7-Gray



with perhaps a different objective but a similar purpose; it fights cost. It does this successfully by doing the tedious hand sanding TEN TIMES FASTER.

The **TAKE-ABOUT** Sander

will stand the continuous grind of the busy shop day in day out; its construction is rugged yet it is a handy tool for the hard-to-sand places. The large belt (4") means more coverage, while the new type 1 H. P. motor gives you power to spare.



Excellent for stairs, small rooms, floor edges. Extra attachment enables you to sand BUTT ENDS OF FLOOR WITH THE GRAIN. Handle for floor work can be furnished.

Think how it can save you money on the job by eliminating much hand sanding, planing and scraping.

Write for Bulletin



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Everlasting, economical weather stripping—

Here's the weather stripping for you to handle and make money on—Kuhlmann's Metal Weather Strip. Contractors, builders and our representatives are making excellent profits by selling and installing these strips. Any good mechanic can do the job perfectly with ordinary tools. It's easy and profitable work.

Kuhlmann's Metal Weather Strips are absolutely wind and water tight.

Write today for our proposition and samples. We can make real money for you. Good territory still open.

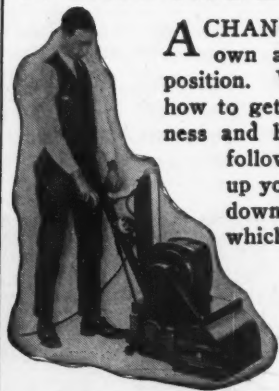


Brass Door Sill

Kuhlmann Metal Weather Strip Co.
3305 Forest Park Blvd. St. Louis, Mo.

**KUHLMANN'S
METAL WEATHER STRIPS**

Get Into the Floor Surfacing Business While the Field is Fresh



A CHANCE to have a business of your own and still retain your present position. Write today—let us tell you how to get started in this Paying Business and how you can make good by following our method in working up your business. Free Trial. Part down—balance easy payments, which machine will earn for you.

\$40 to \$50 a day easily earned with the AUTO-MATIC—the result of 16 years' manufacturing experience. Will save the wages of 5 men and do

work that will stand inspection against the light. SKF ball bearings, carefully protected from dust—Whitney Silent Chain—Roller Pressure Regulator—Force Feed Lubrication—Edge Roller Border Work Eliminated—Steel, not cast iron construction—all dust taken up on forward operation with New Vacuum Nozzle—all working parts inclosed.

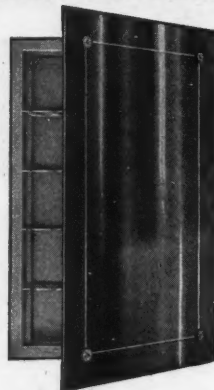
The Little Automatic Surfacing Machine is a wonder for removing varnish from desk tops, counters, etc., or for all sorts of new work.

WAYVELL CHAPPELL & CO.

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WAUKEGAN, ILL.

HESS CABINETS and MIRRORS *Snow-White Steel*



COLONIAL Another De Luxe Style

Beautiful — Distinctive.

The mirror entirely conceals the cabinet. Suitable for the finest bath room.

Made in six sizes. We make five other popular styles.

Ask your jobber; or write for illustrated booklet.
HESS WARMING & VENTILATING CO.
Makers of Hess Welded Steel Furnaces
1220 S. Western Avenue, Chicago.

WEST WATER STREET MICHIGAN FRANKINTON HOTEL



It's conveniently located close to rail and water terminals and is right in the heart of the city. You'll get fine accommodations, large rooms for your money and the very best of hotel service.

Come to "The Frankinton", you'll say that it offers one of the greatest values in hotel accommodations in the country.

A MODERN SYSTEM HOTEL

MILWAUKEE WISCONSIN

THE FRANKINTON WARMING SYSTEM HOTEL
JAMES J. FORDAN - President



MORE HOLDING POWER

The nail tests which the government made are mighty convincing. Samples of every kind of nail on the market were procured and tried out. Finally the decision was given in favor of the old-fashioned type cut nail.

After all, the verdict is not surprising. When you consider the rectangular, wedge shape of Reading Cut Nails, it is easy to understand why they grip so much better. The ordinary wire nail holds by surface friction only while Reading Cut Nails cling to the wood all along the line. They cut their way into the board, spreading the wood with the grain—not across it—and never split the wood.

More and more builders are using them. All sizes are available for flooring, framing, sheathing, siding and shingling. Send for quotations.

READING IRON COMPANY
Reading, Pa.

READING CUT NAILS

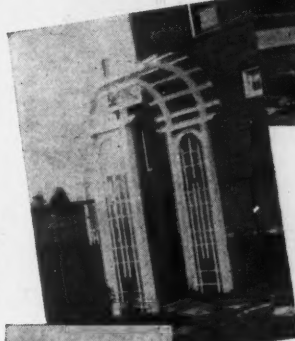
WHEN WRITING ADVERTISERS PLEASE MENTION THE AMERICAN BUILDER

GARDEN FURNITURE



The William Bach,
2820 Wilson Ave.,
Chicago, Ill.
Showing Trellis
background with
Tufa rock, copper
umbrella electric
lighted, planted
with low pines.
Fountain itself
planted with rock
plants. Fish pond
at bottom 14 inches
deep, 8 ft. in cir-
cumference.

The Mr. Kipp,
Elmhurst, Ill.



The Carsao Fountain,
Kedzie & Jackson Blvd.
Copper umbrella and status, electric
lighted with green lights. Built of Tufa
Rock.

Add New Beauty and Distinction

To the Homes and Apartments you
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Ezy Kling Garden Furniture gives the finishing touch that so increases the value of any property. The irresistible charm and attractiveness cannot be overestimated in their selling value.

We manufacture a complete line of garden furniture for every purpose; trellises, palmettos, ornamental wood fences, arches of all styles, arbors of all descriptions, benches, tree seats, decorative bird houses, stepping stones for yards, Tufa Rockeries, Cement Garden Furniture, Fountains, and any other kind of decoration wished.

Let us help you solve your decorating problems. Our service will please you.

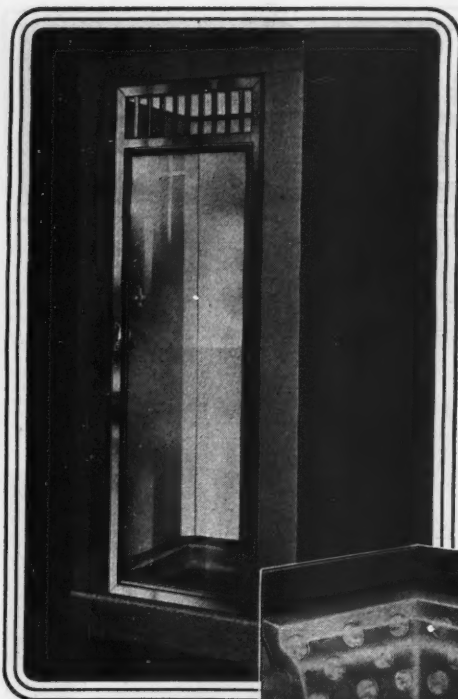
Designs copyrighted
June, 1926

Ezy Kling Garden Furniture Co., Inc.
1116 Lake St. - Village 7573 - Oak Park, Ill.

Mail the Coupon for Complete
Information.

Send me more information

Name.....
Street.....
City..... State.....



The "Admiral" with Vitreous Enamel Finish, Terrazzo Receptor and "Nautilus" Glass Door.

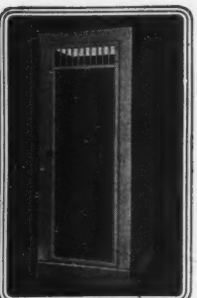
Corner section, Fiat Receptor. Integral with Compartment. Leak proof Construction. (Patent applied for)



Fiat Shower Bath Compartments



The "Admiral" with Extended Receptor.



The "Ensign" with "Marine" Door

The Greatest Progress in Shower Enclosures

Meet the public demand for showers by installing FIAT Shower Bath Compartments—the last word in bathing facilities. Because the FIAT Enclosure is a complete unit within itself it "rides" the building—stays permanently leakproof under all conditions.

The Popular Bath Made Practical

Ideal for new or old buildings. No tearing up floors—no mixing mortar—only one trade involved—complete installation by plumber. Strictly sanitary—no spoiled decorations. Thousands in use.

Doubles the Bathing Facilities of the Home

For very little expense, every home owner or home builder can double his bathing facilities by specifying and installing a FIAT Compartment. Readily installed in minimum space. Made in 7 models, same construction throughout, with different finishes. All reasonably priced.

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Learn about the additional good points of FIAT Shower Bath Compartments by sending the coupon for a copy of a 32-page attractively illustrated catalog.

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1201 Roscoe St., Chicago, Ill.

FIAT METAL MANUFACTURING CO.
1201 Roscoe St., Chicago, Ill.

Please send me full information regarding Fiat Shower Bath Compartments.

Name.....

Street.....

City..... State.....

Please check—I am a Contractor ☐ Plumber ☐ Architect ☐
Dealer ☐ Realtor ☐ Home Owner ☐



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The Latest in Bathroom Accessories

You can now secure the latest thing in Colored Porcelain Enameled Bathroom accessories, at a great saving in cost.

We manufacture a complete line of surface and semi Recess accessories. They can be had in any number of colors or plain white. Their quality is of the best and the price is right.

We want live Distributors and Dealers, and have a fine proposition to offer one man in each locality.

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CENTRAL SPECIALTY MFG. CO.
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Union Woodworking Machines are compact, and easily moved from one job to another. They will attach to any light socket.

In this day of keen competition, every contractor needs Gallmeyer and Livingston machines. They cut costs in many ways. They help you land more jobs. They cost less to buy and to operate. Insurance is less. There is less depreciation. You should know about the many advantages of Gallmeyer and Livingston Union Machines.

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Portable Spray
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Cut Costs
60% to 80%

Two men can Binks-spray the exterior of a house in less than one day. Compare this speed and cost with hand painting time. Interiors, too, are Binks-sprayed quickly. Property is ready for occupancy earlier, a big saving is made in the cost and the work is mechanically perfect.

Building contractors can profit by hiring spray-paint contractors, or operating their own Binks outfit. With it you can quickly spray-paint any wood, metal, plaster, stucco, brick or stone surface—paint fences, garages—anything and everything. The Binks outfit handles every paint, lacquer, varnish, etc.

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BINKS Spray Equipment Company
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Representatives in Principal Cities



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Reliable Parties to Manufacture Readybuilt Fireplaces

You can now buy the fireplace forms, and with our co-operation and knowledge you can make good money; making fireplaces.

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OUR ELECTRIC GRATES

cost you less than any previously offered before in this building field.

Start now and be ready for the Fall business.

We are originators of Readybuilt Fireplaces—

BRICK, STONE and TILE

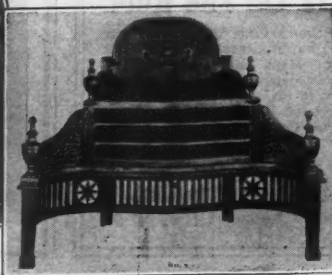
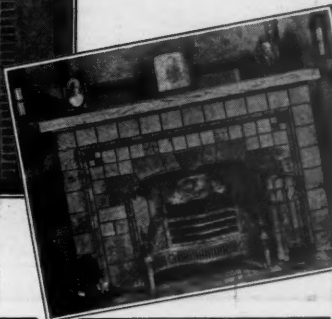
Beware of imitations—We sell and ship from Coast to Coast.

You Have Tried the Rest--Now Buy the Best.

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Patented, May 18,
1928.



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Look for the Name Stamped
on Every Foot of Cord



Silver Lake Co., Newtonville, Mass.



Solid Braided

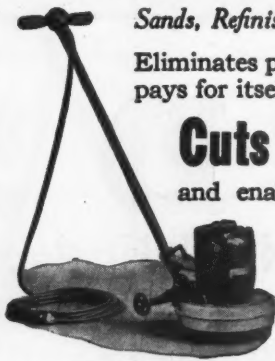
100% Cotton

KENT

INCREASE YOUR PROFITS

Contractors are demanding a light weight portable floor-finishing machine that can be easily wheeled from job to job—plugs in any light socket or wall outlet.

Does the Work of Five Men!



FREE TRIAL

Sands, Refinishes, Waxes, Polishes, Scrubs

Eliminates practically all hand work—pays for itself in a short time.

Cuts Your Costs—

and enables you to save money that now goes to waste. It has done it for others. Why not for you?

Write for 10-day FREE TRIAL OFFER and easy payment plan.

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COPPER FLY WIRE! LESS THAN WHOLESALE PRICES!

Retailers, Builders, Apartment, Hotel and Home Owners—NOW while prices are low is the time to buy your screen wire. Our wire is 99.8% pure copper. Heavier than any other wire made. 3½ to 5 lbs. more per roll.

14 mesh,	16 mesh,	18 mesh,	per square foot in 100 lineal foot rolls.
4c	5c	6c	Widths 18" to 48" every two even inches.

BRONZE WIRE

16 mesh, 5c per square foot in 100 lineal foot rolls. Widths, 24", 26", 28", 30", 32", 34", 36".

We can send cut pieces of wire parcel post. Mail in your list for quotations and save money. Special prices to users who buy 10 rolls or more at one time.

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14 mesh copper... 5c per sq. ft. 16 mesh bronze... 5½c per sq. ft.
16 mesh copper... 5½c per sq. ft. 18 mesh copper... 6½c per sq. ft.

We have in stock all sizes of wire in the above meshes.

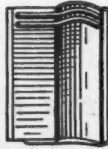
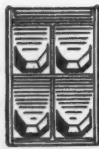
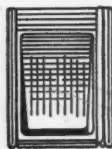
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Wise, thrifty builders will appreciate the saving in putting on Walters and Coopers Metal Shingles. The Walters and Coopers Metal Shingles weigh less than wood or slate and takes lighter frame work to support it. Moreover, it is permanent. This roofing does not require skilled labor to put it on, carries a low rate of insurance and is storm, wind and fireproof. We manufacture a complete line of designs in Painted Tin, Galvanized Sheet Zinc and Copper.

Write for full size samples and prices

National Sheet Metal Roofing Co.

339-345 Grand St.,

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The "OVERHEAD DOOR"

for

**GARAGE
FACTORY
WAREHOUSE**

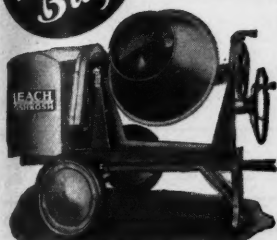


Overhead Door Corp.

7-1003 W. Kickapoo St.
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**Best
Tilter
Buy!**

All-Steel and Low Priced!



Here is the handiest, little trailer tilter on the market. You can't beat it on small concrete jobs.

It has an all-steel construction, ample power, large capacity, rubber tired disc wheels.

Let us send you our tilter catalog. Write today. Dept. 3.

LEACH COMPANY
Oshkosh, Wis.

LEACH MIXERS

Drop Siding Metal Corners

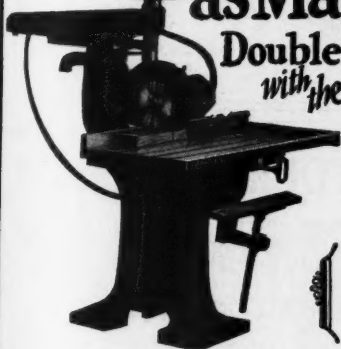
A watertight, long-life, metal building corner... fitted to give butt-mitred joint effect... chemically treated to take paint—no "weatherproofing". Practically invisible and will last as long as the building. Save money and time on any siding job.



Write for sample and price.

F. D. KEES MFG. CO., Box 93, Beatrice, Nebraska

Turn Out Twice as Many Jobs.



Double Your Profits
with the CRESCENT
Universal
Cut-Off
Saw

Send for
FREE
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This speedy, handy machine does the work faster and more accurately than by hand labor, enables you to turn out more jobs during the season, lowers building costs and materially increases your profits. Instantly adjustable to any angle with accurately graduated scales. Eleven different operations, including straight cutting off, angle cutting, ripping and stair routing. Two men can carry it anywhere from job to job. Sturdy, simple, easy to operate, and reliable. No flying sawdust, no delays, no spoiled work, ample capacity, abundant power, thoroughly dependable and guaranteed in every respect.

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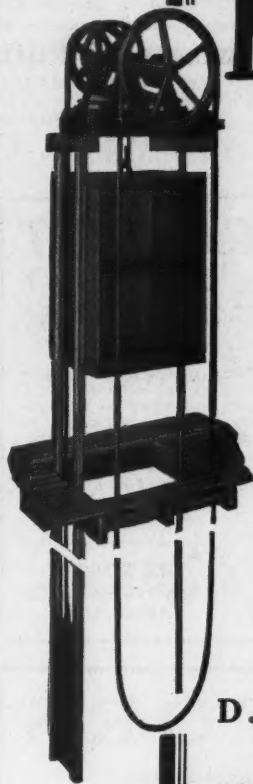
THE CRESCENT MACHINE CO.
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Please send free circular on your Crescent Universal Cut-Off Saw.

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Occupation.....



Matot

Full Diameter Lift
Wheel — Hobbed Gear
Automatic Brake

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Matot machines are roller-bearing throughout, easy of operation, noiseless, and guaranteed for five years.

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PROMPT SHIPMENTS

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Dumb Waiters and Elevators

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FRAZIER SELF-BALANCED STAIRS



The Simplified Disappearing
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PRICE \$35.00

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No Weights—Springs or Cable are used. Installed by anybody in one-half hour.

OUR GUARANTEE—In event stairs are not as represented return to us at our expense.

Attractive Specialty—Salesman Arrangements

FRAZIER STAIR COMPANY

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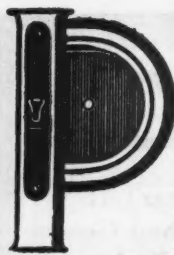
Gentlemen: I am an Architect ☐ Builder ☐ Dealer ☐

Please send Details on Frazier Stairs

Name.....

Address.....

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15,000 sets of Pullman UNIT Sash Balances

and expect to install **over 30,000 sets** this year. Mr. Mills writes us Pullman is more economical even in speculative building than weights and cords and believes we have the best window control available.

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Slides Up in the Ceiling When Not In Use

USE YOUR ATTIC

Non-collapseable; the stair stringers are all one piece, rigid and neat in appearance. Strong enough to carry a person on each step. Perfectly counterpoised by highly resilient springs enclosed in well finished drums.

Send for particulars
THE STAIRWAY MANUFACTURING CO.
Akron, Ohio

The Contractor's Delight

Specially Designed for Contractors



Special Contractors Keyboard & Specification Tabulator

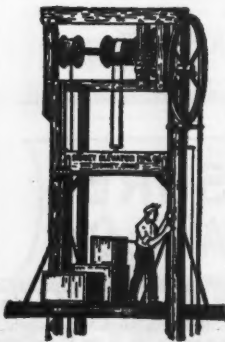
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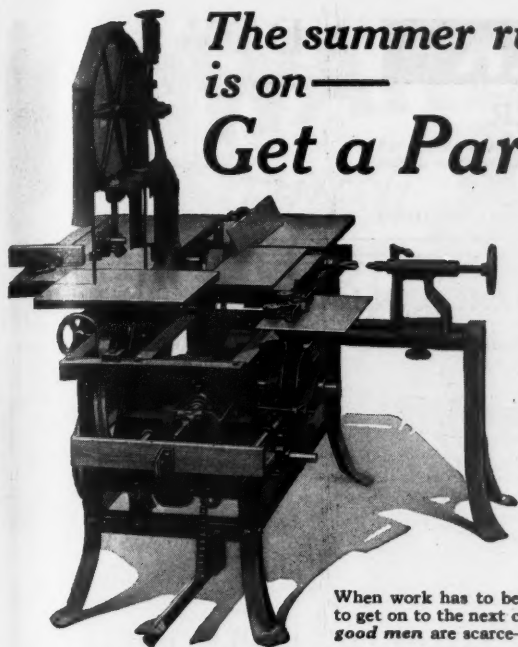


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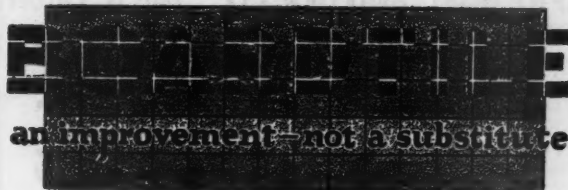
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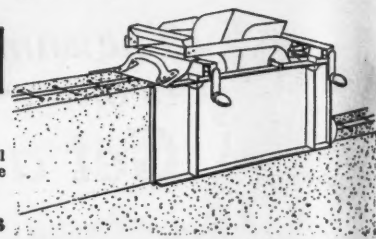
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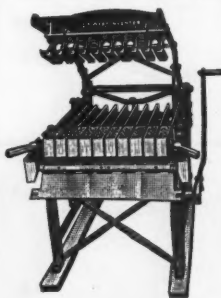
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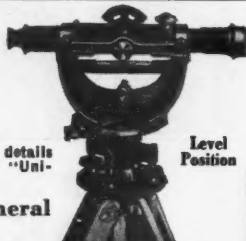


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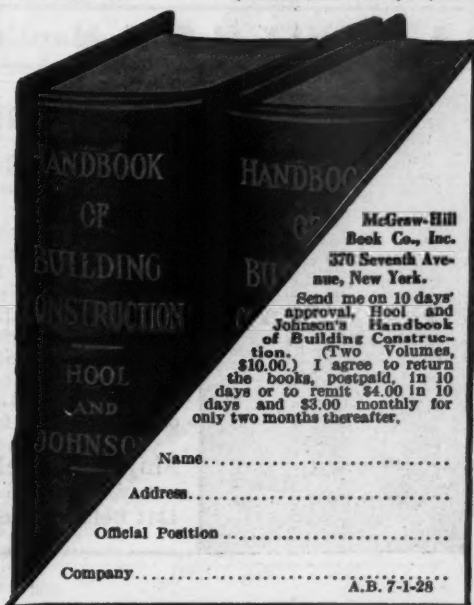
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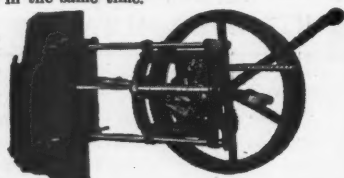
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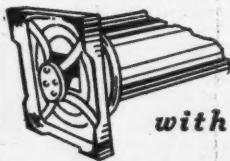
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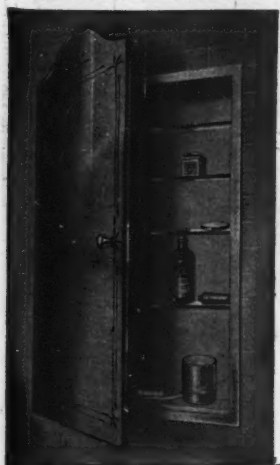
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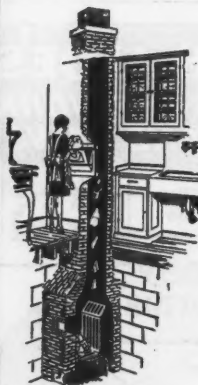
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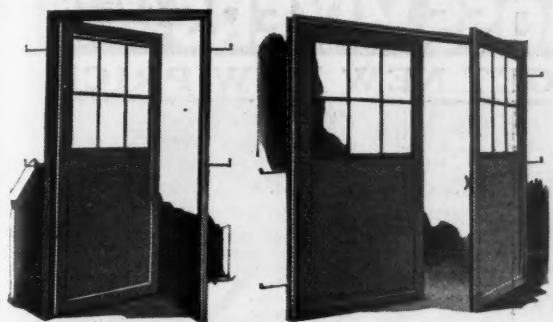
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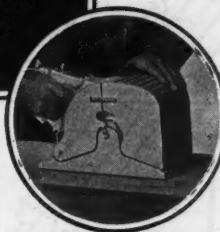
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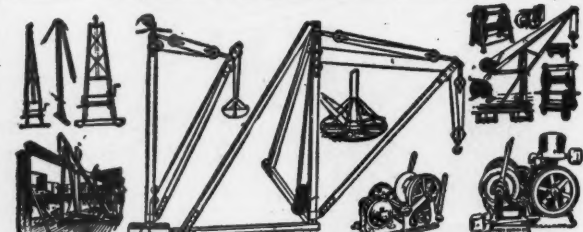


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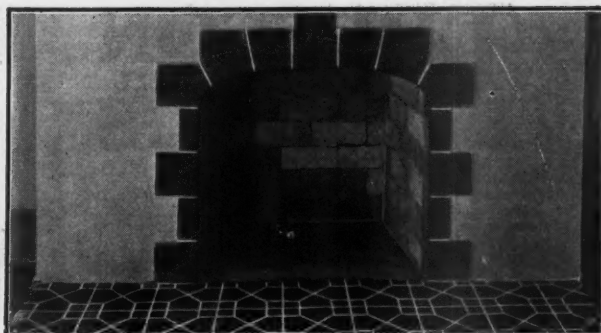
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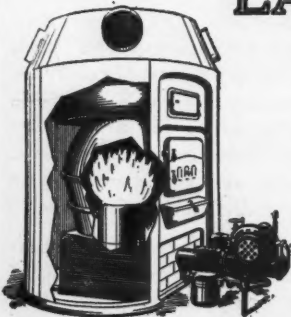
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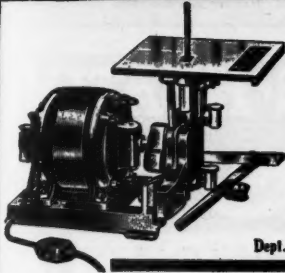
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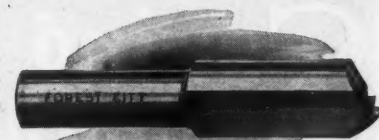


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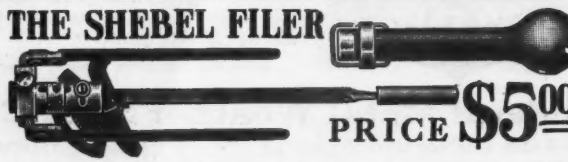
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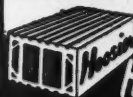


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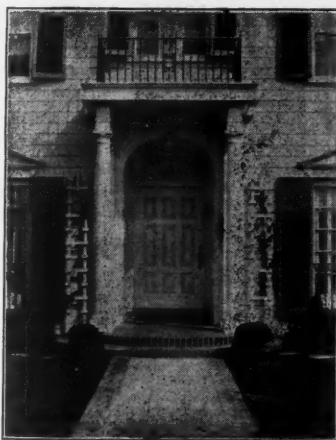
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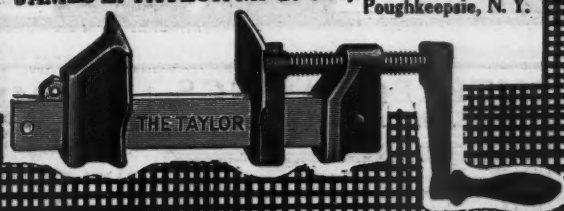


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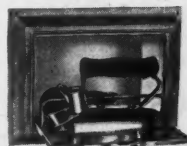
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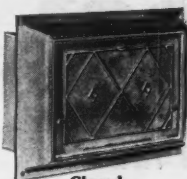
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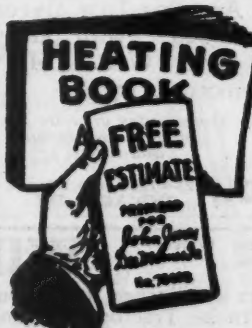
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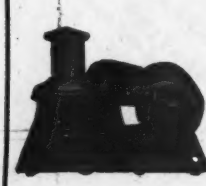

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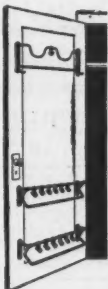
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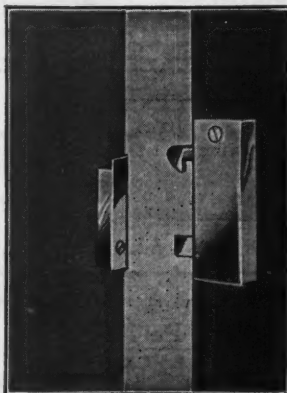
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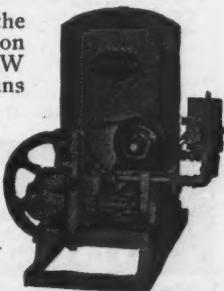
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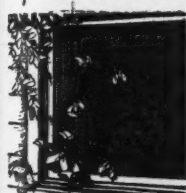
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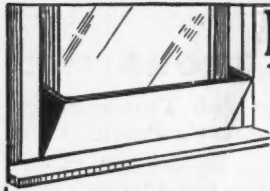
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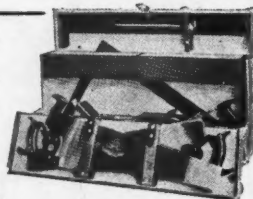
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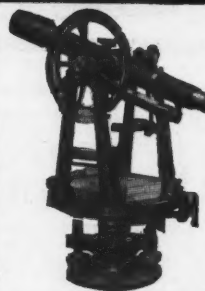
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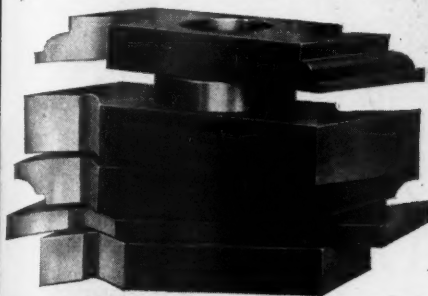
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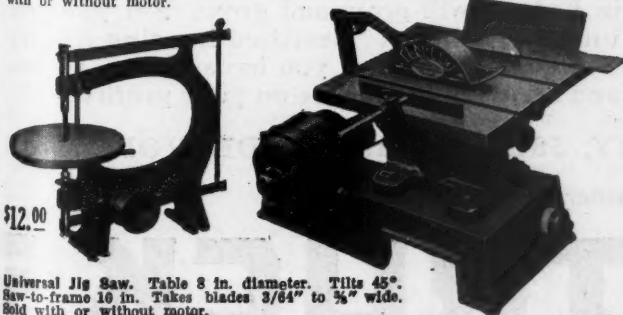
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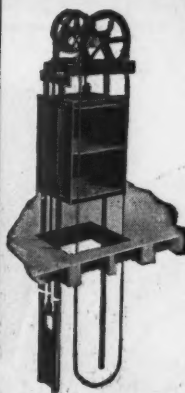
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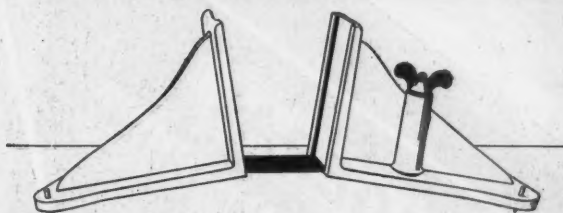


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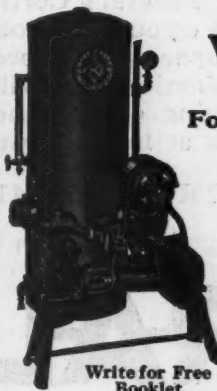
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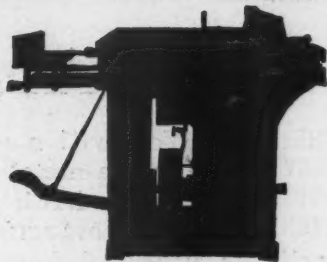
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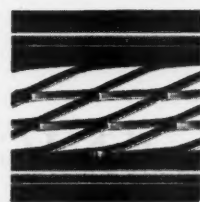
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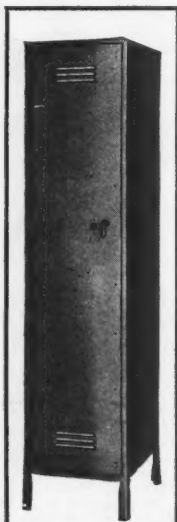


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OTHER JOBS WILL COME



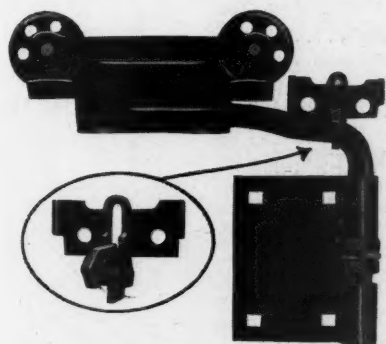
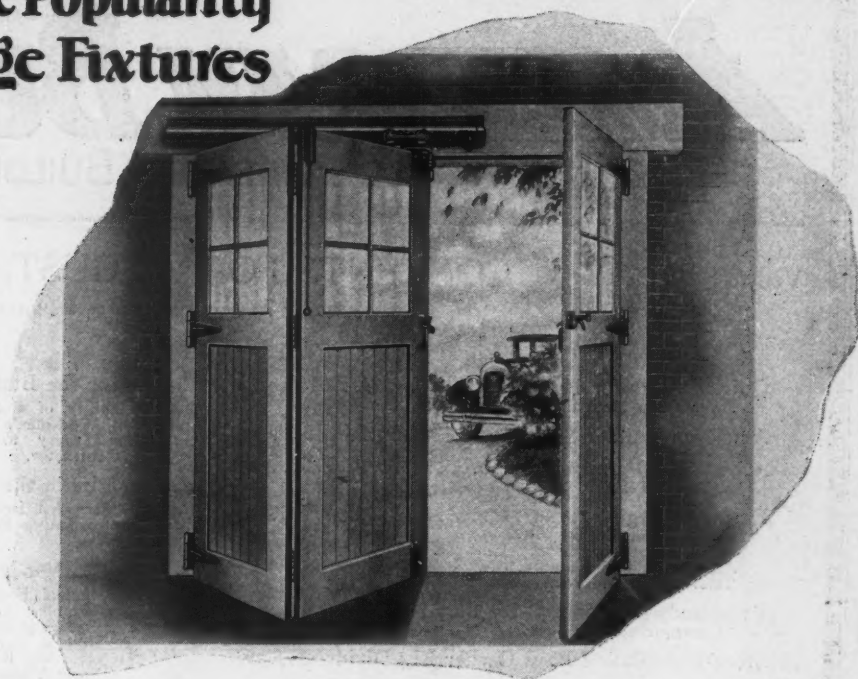
You give your client a roof that will retain its character and charm, without care or attention, down through the ages, when you lay Milcor Pure Copper Spanish Tile. In addition to being a replica of the quaint tile of old Spain this Tile has a patented side-locking feature [Titelock] that affords complete protection against the elements. It is also available in "Copper-bearing" Terne Plate, painted or galvanized, finished in any desired color scheme. Use this Tile once. . . . It will prove a good ad for your business.

MILCOR

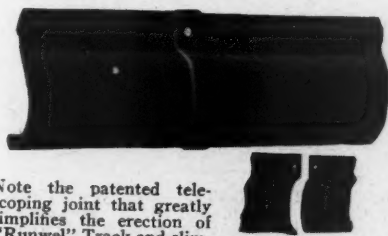
MILWAUKEE CORRUGATING CO., Milwaukee, Wis.—Chicago, Ill.; Kansas City, Mo.; La Crosse, Wis.; Boston, Mass.

For further details concerning Titelock Spanish Tile consult the Milcor Sheet Metal Guide. Copies of this book, quantity surveys and estimates, may be had upon request . . . write

The Reasons for the Popularity of No. 50 'E-Z' Garage Fixtures



The catch in the circle above, a new Frantz feature, makes it impossible for the swivel bolt to engage improperly when doors are being closed. The wheels of the No. 50 Hanger are of cast iron, and have steel roller bearings and axles. All other parts are of wrought steel. Note the adjustment feature on the swivel bolt which makes it possible to raise the doors clear of the floor.



Note the patented telescoping joint that greatly simplifies the erection of "Runwel" Track and eliminates the necessity of joint brackets.

The wheel tread of "Runwel" Track used with all No. 50 "E-Z" Sets is shaped to eliminate friction, and provides a wide, free running space for the hanger. "Runwel" is a one piece track that requires no brackets to fasten it to the building.

BY providing every convenience to be desired without extra equipment or added cost to the user, Frantz No. 50 "E-Z" Garage Door Fixtures have won the praise of Carpenters and Builders who know from experience that a garage is only as satisfactory as the operation of its doors. These men point out the following outstanding reasons for the popularity of No. 50 "E-Z" Fixtures:

- 1 Installation:** Very simple. The one piece track fastens flat over the opening (no blocking-out or brackets required). Hanger, hinges, foot and chain bolts, etc., require no experience or extra work to install.
- 2 Operation:** Easy. Doors slide and fold clear of the opening and, if desired, can be swung around flat against the front of the building where room for so doing is provided.
- 3 The Hardware:** Combines time and labor saving conveniences with the high quality materials and expert workmanship put into all Frantz Hardware.
- 4 Packing:** The parts of each set—whether for 2, 3, 4, 5, or 6 doors—are snugly packed in strong cartons to assure perfect delivery. All necessary lag screws, bolts, screws and instructions for easy installation are included.

For doors of light construction No. 40 "E-Z" Garage Door Fixtures operate the same as the No. 50 set. And for large and heavy doors, the No. 60 "E-Z" Fixtures should be used. For complete details about these popular "E-Z" Fixtures, write Dept. A-8.

FRANTZ MANUFACTURING CO.
Sterling, Illinois



"No Hardware Is Genuine FRANTZ QUALITY Without the Red Label"